



471506

REPORT OF GROUND-WATER QUALITY

FOR THE

ALBION-SHERIDAN TOWNSHIP LANDFILL
SHERIDAN-ALBION TOWNSHIP, CALHOUN COUNTY, MICHIGAN

JUNE 2000

Prepared For:

CITY OF ALBION
112 WEST CASS STREET
ALBION, MICHIGAN 49224

DECKER MANUFACTURING CORP.
703 NORTH CLARK STREET
ALBION, MICHIGAN 49224

Prepared By:

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1.0 INTRODUCTION

On behalf of Decker Manufacturing Corporation and the City of Albion (Settling O&M Defendants), this report was developed by Hull & Associates, Inc. (HAI) to comply with monitoring and reporting requirements established in the approved Operation and Maintenance Plan (O&M Plan). The information contained in this report represents the second quarterly ground-water sampling event identified as monitoring Year #1, Quarter #2.

Field activities were completed in January/February of 2000 in accordance with the O&M Plan. These activities involved the sampling of six monitor wells screened in the shallow bedrock unit, three residential wells and the monitoring of five methane probes.

2.0 GROUND-WATER MONITORING

2.1 Sampling And Analysis

The wells required to be monitored on a quarterly basis consist of three residential wells (RW04, RW06, and RW07) and six shallow bedrock wells (MW02SB, MW04SB through MW06SB, MW08SB, and MW09SB). Figure 1 illustrates the location of all groundwater monitor wells on or near the landfill property.

Ground-water samples were collected by representatives of HAI and analyzed by Test America Inc. Nine ground-water samples were collected during the January/February 2000 sampling event. Samples were collected from six shallow bedrock monitor wells and three residential wells. Additionally, a duplicate sample was also collected from a randomly selected monitor well (MW05SB). One field blank and one trip blank were also collected and analyzed for quality assurance/quality control purposes.

2.2 Laboratory Analytical Data

The laboratory analytical and quality control reports developed by Test America for the January/February 2000 sampling event, are provided in Attachment A-1. Provided in Attachment A-2 are copies of the ground-water monitor well field data sheets. Copies of the Chain of Custody and Request for Analysis forms are provided in Attachment A-3.

Included in Attachment B-1 are Tables 1-6, which provides a summary of the laboratory analytical data for the inorganic and organic parameters compiled for each of the monitor wells throughout the monitoring period. Included in Attachment B-2 are Tables 7 through 9, which provide a summary of the laboratory analytical results for the residential wells throughout the monitoring period.

The laboratory analytical and CPT quality control reports were subcontracted to ECT.CON, Inc. of Imperial, Pennsylvania, for third party data validation. The results of the third party validation indicate that the analytical data report for the January/February 2000 O&M sampling event were valid. After discussions with U.S. EPA and MDEQ, it was decided that the results of the third party validation are not to be included in this report due to the excessive size of the data package. However, these results will be available upon request.

Ground-water samples collected from monitor wells screened in the shallow bedrock unit were analyzed for dissolved arsenic and nitrogen-ammonia as required in Section 3.2.3 of the O&M Plan. With the exception of a few parameters, all parameter concentrations in all monitor wells were non detect. A review of these analytical results indicate that nitrogen-ammonia was reported in four samples. Nitrogen-Ammonia was detected in MW04SB at 26.7 mg/L, MW06SB at 19.2 mg/L, MW08SB at 0.9 mg/L and MW09SB at 12.0 mg/L. Dissolved Arsenic was detected in MW04SB at 0.03 mg/L and in MW06SB at 0.133 mg/L. As required in Section 3.2.10 of the O&M Plan, an arsenic isoconcentration map with spatial distributions in ground-water is illustrated on Figure 2.

Ground-water samples collected from residential wells (RW-4, RW-6, and RW-7) were analyzed for the following list of analytes: antimony, ammonia, aluminum, arsenic, cobalt, manganese, nickel, benzene, vinyl chloride, and 1,2 dibromo-3-chloropropane as required in Section 3.2.3 of the O&M Plan. A review of the analytical results identified that concentrations for all parameters were reported as not detect in all samples with three exceptions. Ammonia was reported at a concentration of 0.15 mg/L in the sample collected from RW-4, and dissolved Manganese was detected in RW-4 at 0.052 mg/L, RW-6 at 0.047 mg/L and RW-7 at 0.034 mg/L. A comparison of the January/February sampling data to previous events indicates that concentrations of the detected parameter have remained similar over this time period.

2.3 Data Review

On January 25, 2000, static water elevations were obtained from select monitor wells screened in the, shallow bedrock unit. A potentiometric surface map was constructed for the shallow bedrock horizon beneath the Site. Ground-water was determined to flow to the west and southwest. Flow becomes more southerly in the southern portion of the Site. A summary of ground-water elevations is presented on Table 10 in Attachment C-1 and also listed on Figure 3.

3.0 EXPLOSIVE GAS MONITORING

Illustrated on Figure 1 are the locations of the explosive gas monitoring network (GP-1 through GP-5). On January 25, 2000, gas probes GP-1 through GP-5 were monitored for lower explosive limit (LEL) for Methane, Hydrogen Sulfide (H_2S), and oxygen levels. Monitoring was conducted utilizing a *MSA 3100 GasScope* for all field parameters. Results from monitoring are presented on Table 11 in Attachment C-2. Explosive gas was not detected above instrument detection levels with two exceptions. Explosive gas was detected in GP-2 at 18% and GP-3 at 0.4% (8% of the LEL).

GP-2 is located along the eastern property line on a slope east of the drainage swale. Based on the sandy nature of soils at the site, it is more likely that the potential explosive gases would naturally vent in the drainage swale prior to reaching GP-2. Therefore, the explosive gas concentrations in GP-2 appear to be anomalous as there is an apparent lack of a preferential pathway. This condition will be closely monitored in the future.

4.0 LANDFILL INSPECTION

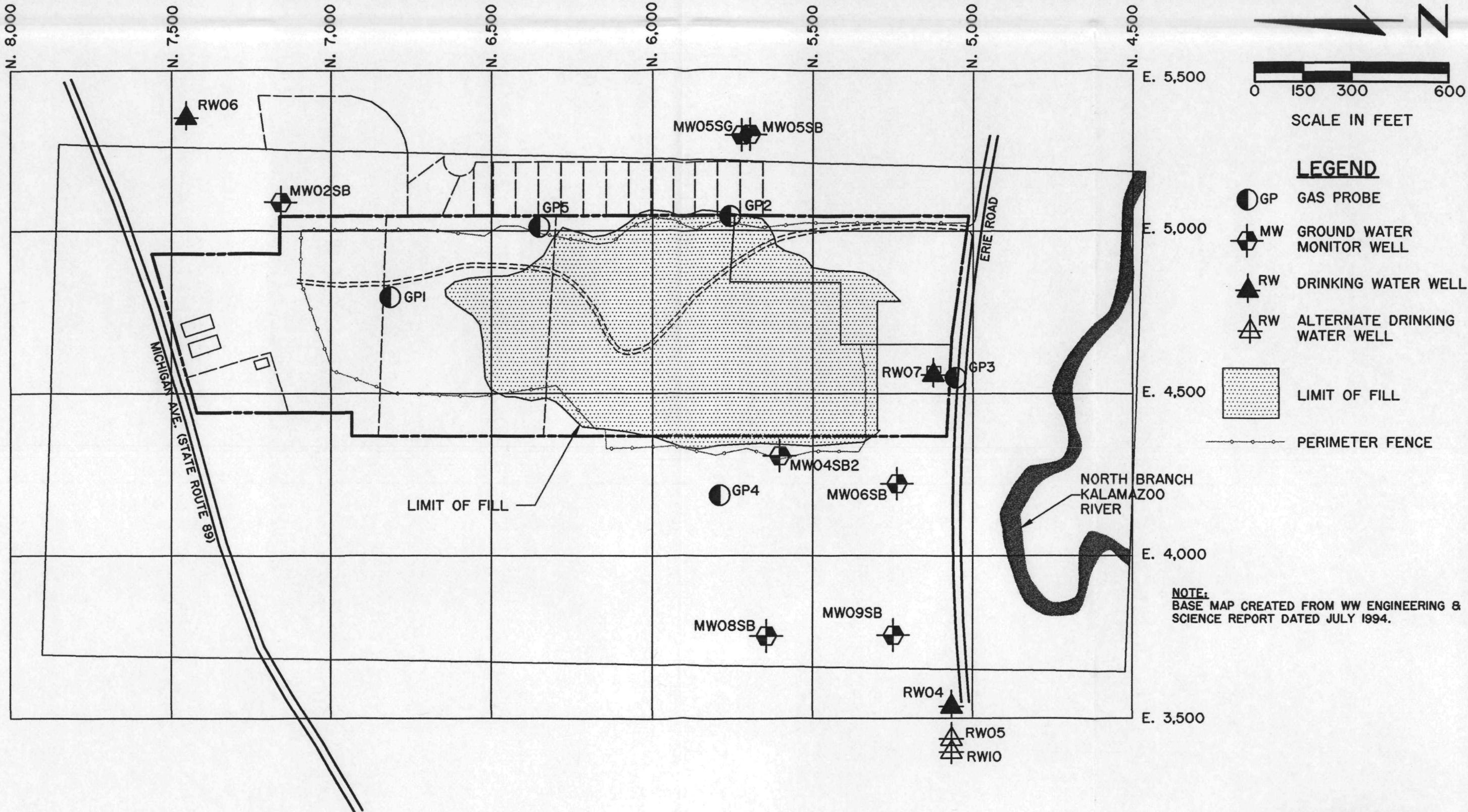
The initial landfill inspection was completed on February 29, 2000 in conjunction with the second quarterly ground-water sampling event at the Site. The inspection was completed by Terry Baehr. Weather conditions were partly sunny, breezy with ambient air temperature in the lower 40s ($^{\circ}$ F). The areas of long-term maintenance concerns that were identified during this initial inspection were observed to evaluate if detrimental impacts have occurred. These areas of concern were discussed in detail at the Final Certification site walk-over that was completed on November 30, 1999.

During the inspection, significant erosion features were observed in the southwest portion of the landfill in areas where the upper drainage swale discharges to the west detection/infiltration basin and along the eastern sideslope of the west detention basin. In addition, minor erosion was also noted in the northeast portion of the landfill where the upper drainage swale discharges to the eastern perimeter ditch. Photo-documentation is provided in Attachment D. No corrective actions were taken, as the RA contractor will remobilize to the Site to correct observed problems in the spring of 2000.

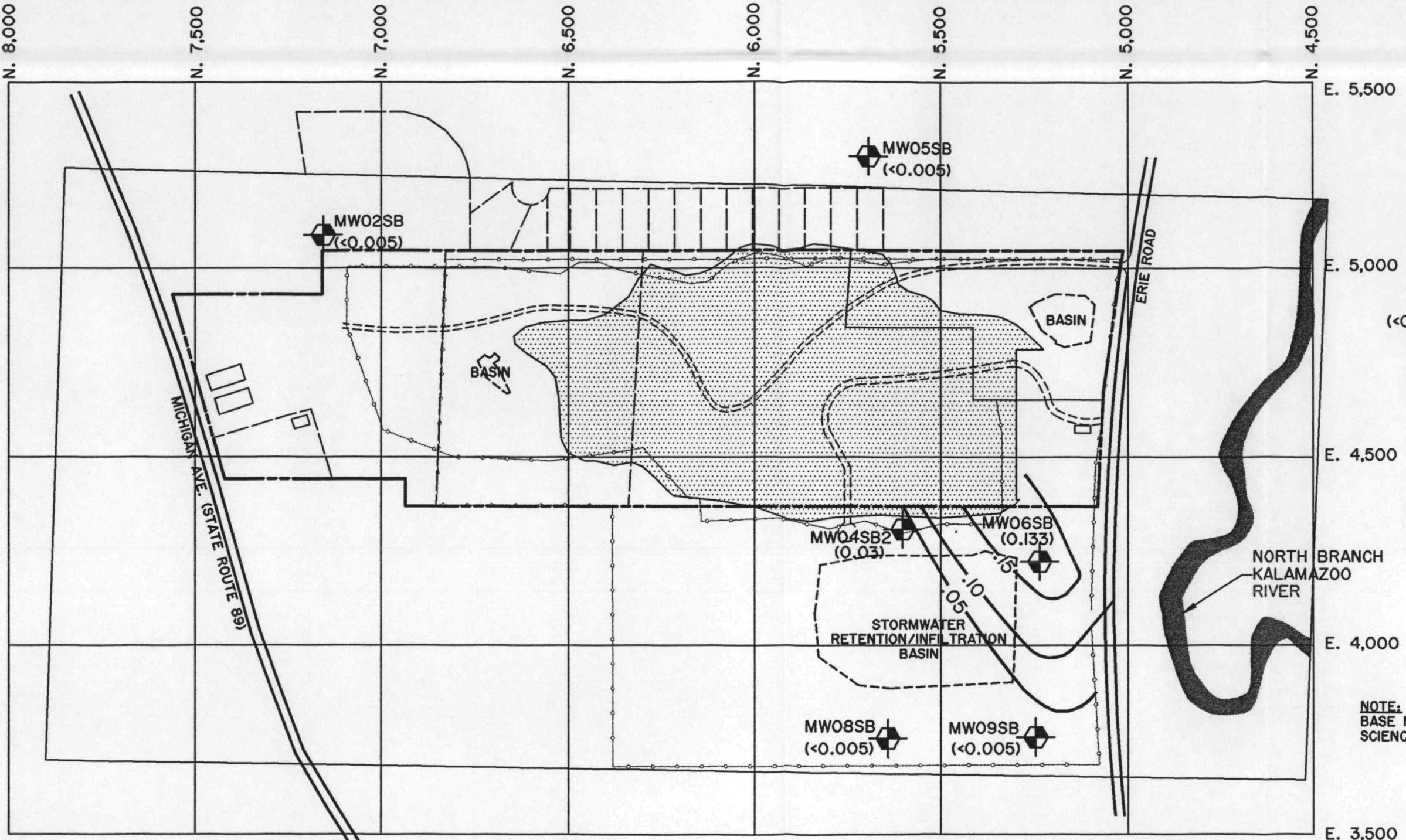
5.0 SUMMARY

The information in this report of ground-water quality (June 2000) is provided to comply with conditions stated in the approved O&M Plan developed by *SECOR* International Incorporated (February 1999).

Additionally, this report of ground-water quality includes the inspection of explosive gas probes and monitoring of landfill gas. All sampling and analysis activities were completed in accordance with the O&M Plan. The submittal deadline is 75 days from the end of the quarter in which the sampling occurred as stated in section 3.2.10 of the O&M Plan. This report represents Year #1, Quarter #2, and therefore the submittal deadline is June 14, 2000.



Hull & Associates, Inc. TOLEDO, OHIO
ALBION-SHERIDAN TOWNSHIP LANDFILL
FIGURE I
QUARTERLY SAMPLING POINTS
SHERIDAN TWP., CALHOUN CO., MICH.
DATE: JUNE 2000
ALB025



N.
N. 8,000
N. 7,500
N. 7,000
N. 6,500
N. 6,000
N. 5,500
N. 5,000
N. 4,500
E. 5,500
E. 5,000
E. 4,500
E. 4,000
E. 3,500

Z

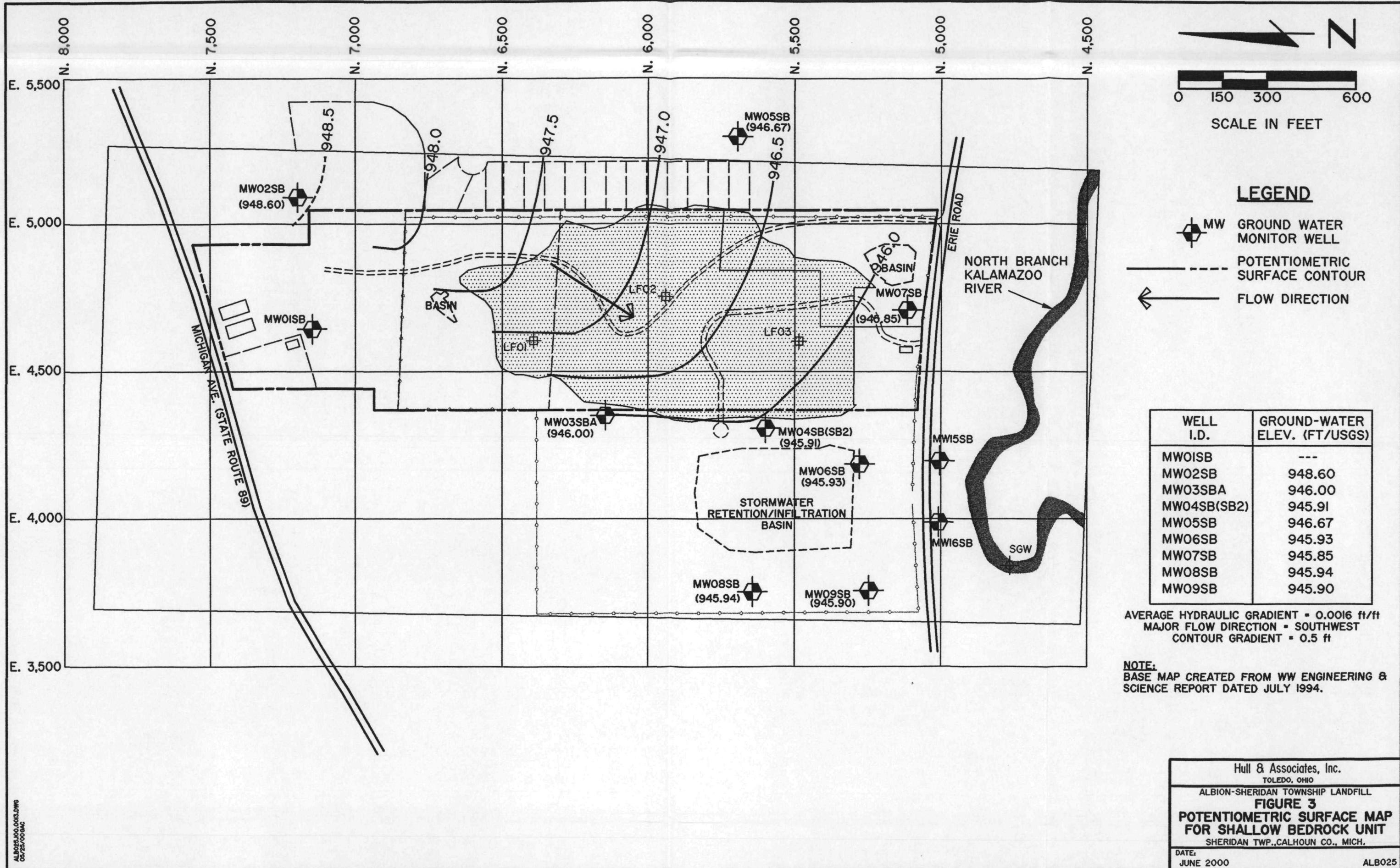
0 150 300 600
SCALE IN FEET

LEGEND

MW GROUND WATER MONITOR WELL
(<0.005) ARSENIC CONCENTRATIONS mg/l

NOTE:
BASE MAP CREATED FROM WW ENGINEERING &
SCIENCE REPORT DATED JULY 1994.

Hull & Associates, Inc. TOLEDO, OHIO
ALBION-SHERIDAN TOWNSHIP LANDFILL
FIGURE 2
ARSENIC ISOCRON MAP
SHERIDAN TWP., CALHOUN CO., MICH.
DATE: JUNE 2000
ALB025



ATTACHMENT A

Laboratory Analytical and Quality Control Report,
Ground-water Monitor Well Field Data Sheets,
Chain of Custody, and Request for Analysis Forms

ATTACHMENT A-1:

Laboratory Analytical and Quality
Control Report for the January/February 2000
Sampling Event

ATTACHMENT A-2:

Ground-water Monitor Well Field
Data Sheets for the January/February 2000
Sampling Event

ATTACHMENT A-3:

Chain of Custody and Request for
Analysis Forms for the January/February 2000
Sampling Event

ATTACHMENT A-1

Laboratory Analytical and Quality Control Report
for the January/February 2000 Sampling Event

TestAmerica

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ANALYTICAL AND QUALITY CONTROL REPORT

William G. Petruzzi
HULL & ASSOC. (Toledo)
3401 Glendale Ave.
Suite 300
Toledo, OH 43614

02/14/2000

Job Number: 00.01064

Enclosed is the Analytical and Quality Control reports for the following samples submitted to the Dayton Division of TestAmerica, Inc. for analysis:

<u>Sample Number</u>	<u>Sample Description</u>	<u>Date Taken</u>	<u>Date Received</u>
586508	ALB025:MW02SB:G012500:340	01/25/2000	01/27/2000
586509	ALB025:MW05SB:G012500A:340	01/25/2000	01/27/2000
586510	ALB025:MW05SB:G012500B:340	01/25/2000	01/27/2000
586511	ALB025:MW06SB:G012500:340	01/25/2000	01/27/2000
586512	ALB025:MW04SB:G012500:340	01/25/2000	01/27/2000
586513	ALB025:MW08SB:G012500:340	01/25/2000	01/27/2000
586514	ALB025:MW09SB:G012500:340	01/25/2000	01/27/2000
586515	ALB025:FB1:W012500:340	01/25/2000	01/27/2000

The Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TestAmerica, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

Reproduction of this analytical report is permitted only in its entirety.

Enclosure


Approved By
Kenneth J. Hull

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ANALYTICAL REPORT

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HULL & ASSOC. (Toledo)
3401 Glendale Ave.
Suite 300
Toledo, OH 43614

02/14/2000

Job Number: 00.01064

Client Project ID: ALB025 Albion-Sheridan Landfill

Result	Flag	Units	Date Analyzed	Prep	Run	Reporting Limit	Analyst Initials	Method Reference
				Date	Batch Number			

SAMPLE NO.	SAMPLE DESCRIPTION	DATE/TIME TAKEN
586508	ALB025:MW02SB:G012500:340	01/25/2000 13:40

Nitrogen, Ammonia Direct	<0.05	mg/L	02/03/2000	1019	<0.05	imp	EPA 350.1
Solids, Total Dissolved	619	mg/L	01/28/2000	1023	<50	cdc	EPA 160.1
Conductivity (On Site)	1108	umhos/cm	01/25/2000	181		kbh	
eH (On Site)	-22	millivts	01/25/2000	5		kbh	
Oxygen, Dissolved (On Site)	0.59	mg/L	01/25/2000	42		kbh	
pH (On Site)	7.46	S.U.	01/25/2000	455		kbh	
Temperature (On Site)	10.0	Degree C	01/25/2000	187		kbh	
ICPMS DISSOLVED METALS	Complete		02/01/2000	420	Complete	ekh	SW 6020
Arsenic, Dissolved, ICPMS	<0.0050	mg/L	02/01/2000	594	<0.0050	ekh	SW 6020

SAMPLE NO.	SAMPLE DESCRIPTION	DATE/TIME TAKEN
586509	ALB025:MW05SB:G012500A:340	01/25/2000 14:15

Nitrogen, Ammonia Direct	<0.05	mg/L	02/03/2000	1019	<0.05	imp	EPA 350.1
Solids, Total Dissolved	449	mg/L	01/28/2000	1023	<50	cdc	EPA 160.1
Conductivity (On Site)	738	umhos/cm	01/25/2000	181		kbh	
eH (On Site)	-27	millivts	01/25/2000	5		kbh	
Oxygen, Dissolved (On Site)	0.48	mg/L	01/25/2000	42		kbh	

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02/14/2000

Job Number: 00.01064

Client Project ID: ALB025 Albion-Sheridan Landfill

Result	Flag	Units	Date Analyzed	Prep	Run	Reporting Analyst	Initials	Method Reference
				Date	Batch			

SAMPLE NO.	SAMPLE DESCRIPTION	DATE/TIME TAKEN
586509	ALB025:MW05SB:G012500A:340	01/25/2000 14:15

pH (On Site)	7.51	S.U.	01/25/2000	455	kbh		
Temperature (On Site)	9.6	Degree C	01/25/2000	187	kbh		
ICPMS DISSOLVED METALS	Complete		02/01/2000	420	Complete	ekh	SW 6020
Arsenic, Dissolved, ICPMS	<0.0050	mg/L	02/01/2000	594	<0.0050	ekh	SW 6020

SAMPLE NO.	SAMPLE DESCRIPTION	DATE/TIME TAKEN
586510	ALB025:MW05SB:G012500B:340	01/25/2000 14:15

Nitrogen, Ammonia Direct	<0.05	mg/L	02/03/2000	1020	<0.05	imp	EPA 350.1
Solids, Total Dissolved	439	mg/L	01/28/2000	1023	<50	cdc	EPA 160.1
Conductivity (On Site)	738	umhos/cm	01/25/2000	181		kbh	
eH (On Site)	-27	millivts	01/25/2000	5		kbh	
Oxygen, Dissolved (On Site)	0.48	mg/L	01/25/2000	42		kbh	
pH (On Site)	7.51	S.U.	01/25/2000	455		kbh	
Temperature (On Site)	9.6	Degree C	01/25/2000	187		kbh	
ICPMS DISSOLVED METALS	Complete		02/01/2000	420	Complete	ekh	SW 6020
Arsenic, Dissolved, ICPMS	<0.0050	mg/L	02/01/2000	594	<0.0050	ekh	SW 6020

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ANALYTICAL REPORT

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Job Number: 00.01064

Client Project ID: ALB025 Albion-Sheridan Landfill

SAMPLE NO.	SAMPLE DESCRIPTION		Prep	Run				
			Date	Batch	Batch	Reporting	Analyst	Initials
Result	Flag	Units	Analyzed	Number	Number	Limit		Method Reference
586511	ALB025:MW06SB:G012500:340							
Nitrogen, Ammonia Direct	19.2	mg/L	02/03/2000	1020	<0.05	imp	EPA 350.1	
Solids, Total Dissolved	565	mg/L	01/28/2000	1023	<50	cdc	EPA 160.1	
Conductivity (On Site)	1146	umhos/cm	01/25/2000	181		kbh		
eH (On Site)	-26	millivts	01/25/2000	5		kbh		
Oxygen, Dissolved (On Site)	0.71	mg/L	01/25/2000	42		kbh		
pH (On Site)	7.44	S.U.	01/25/2000	455		kbh		
Temperature (On Site)	8.5	Degree C	01/25/2000	187		kbh		
ICPMS DISSOLVED METALS	Complete		02/09/2000	423	Complete	ekh	SW 6020	
Arsenic, Dissolved, ICPMS	0.133	mg/L	02/09/2000	601	<0.0050	ekh	SW 6020	
SAMPLE NO.	SAMPLE DESCRIPTION							
586512	ALB025:MW04SB:G012500:340							

DATE/TIME TAKEN
 01/25/2000 18:15

DATE/TIME TAKEN
 01/25/2000 17:10

Nitrogen, Ammonia Direct	26.7	mg/L	02/03/2000	1020	<0.05	imp	EPA 350.1	
Solids, Total Dissolved	673	mg/L	01/28/2000	1023	<50	cdc	EPA 160.1	
Conductivity (On Site)	1383	umhos/cm	01/25/2000	181		kbh		
eH (On Site)	-12	millivts	01/25/2000	5		kbh		
Oxygen, Dissolved (On Site)	0.80	mg/L	01/25/2000	42		kbh		

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ANALYTICAL REPORT

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02/14/2000

Job Number: 00.01064

Client Project ID: ALB025 Albion-Sheridan Landfill

Result	Flag	Units	Date Analyzed	Prep	Run	Reporting Limit	Analyst Initials	Method Reference
				Date	Batch Number			

SAMPLE NO.	SAMPLE DESCRIPTION	DATE/TIME TAKEN
586512	ALB025:MW04SB:G012500:340	01/25/2000 17:10

pH (On Site)	7.29	S.U.	01/25/2000	455	kbh
Temperature (On Site)	10.5	Degree C	01/25/2000	187	kbh
ICPMS DISSOLVED METALS	Complete		02/09/2000	423	ekh SW 6020
Arsenic, Dissolved, ICPMS	0.030	mg/L	02/09/2000	601	ekh SW 6020

SAMPLE NO.	SAMPLE DESCRIPTION	DATE/TIME TAKEN
586513	ALB025:MW08SB:G012500:340	01/25/2000 15:20

Nitrogen, Ammonia Direct	0.90	mg/L	02/03/2000	1020	<0.05	imp	EPA 350.1
Solids, Total Dissolved	580	mg/L	01/28/2000	1023	<50	cdc	EPA 160.1
Conductivity (On Site)	960	umhos/cm	01/25/2000	181		kbh	
eH (On Site)	-17	millivts	01/25/2000	5		kbh	
Oxygen, Dissolved (On Site)	0.12	mg/L	01/25/2000	42		kbh	
pH (On Site)	7.38	S.U.	01/25/2000	455		kbh	
Temperature (On Site)	9.4	Degree C	01/25/2000	187		kbh	
ICPMS DISSOLVED METALS	Complete		02/09/2000	423	Complete	ekh	SW 6020
Arsenic, Dissolved, ICPMS	<0.0050	mg/L	02/09/2000	601	<0.0050	ekh	SW 6020

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ANALYTICAL REPORT

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02/14/2000

Job Number: 00.01064

Client Project ID: ALB025 Albion-Sheridan Landfill

SAMPLE NO.	SAMPLE DESCRIPTION	Prep Run						DATE/TIME TAKEN
		Date Analyzed	Batch Number	Batch Number	Reporting Limit	Analyst Initials	Method Reference	
Result	Flag	Units						
586514	ALB025:MW09SB:G012500:340						01/25/2000 16:00	

Nitrogen, Ammonia Direct	12.0	mg/L	02/03/2000	1020	<0.05	imp	EPA 350.1
Solids, Total Dissolved	662	mg/L	01/28/2000	1023	<50	cdc	EPA 160.1
Conductivity (On Site)	1235	umhos/cm	01/25/2000	181		kbh	
eH (On Site)	-14	millivts	01/25/2000	5		kbh	
Oxygen, Dissolved (On Site)	0.56	mg/L	01/25/2000	42		kbh	
pH (On Site)	7.31	S.U.	01/25/2000	455		kbh	
Temperature (On Site)	10.0	Degree C	01/25/2000	187		kbh	
ICPMS DISSOLVED METALS	Complete		02/09/2000	423	Complete	ekh	SW 6020
Arsenic, Dissolved, ICPMS	<0.0050	mg/L	02/09/2000	601	<0.0050	ekh	SW 6020

SAMPLE NO.	SAMPLE DESCRIPTION	DATE/TIME TAKEN					
586515	ALB025:FB1:W012500:340	01/25/2000 13:00					

Nitrogen, Ammonia Direct	<0.05	mg/L	02/03/2000	1020	<0.05	imp	EPA 350.1
Solids, Total Dissolved	<50	mg/L	01/28/2000	1023	<50	cdc	EPA 160.1
ICPMS DISSOLVED METALS	Complete		02/09/2000	423	Complete	ekh	SW 6020
Arsenic, Dissolved, ICPMS	<0.0050	mg/L	02/09/2000	601	<0.0050	ekh	SW 6020

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QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION

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02/14/2000

Job Number: 00.01064

Analyte	Prep Batch Number	Run Batch Number	CCV True Concentration	CCV Concentration Observed	Flag	Units	Percent Recovery
Nitrogen, Ammonia Direct		1019	0.50	0.51		mg/L	102
Nitrogen, Ammonia Direct		1020	0.50	0.49		mg/L	98
Arsenic, Dissolved, ICPMS		594	0.050	0.050		mg/L	100
Arsenic, Dissolved, ICPMS		601	0.050	0.049		mg/L	98

CCV - Continuing Calibration Verification

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QUALITY CONTROL REPORT BLANKS

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02/14/2000

Job Number: 00.01064

Analyte	Prep	Run				Date
	Batch	Batch	Blank	Analysis	Flag	
	Number	Number			Units	Prepped
Nitrogen, Ammonia Direct		1019	<0.03		mg/L	
Nitrogen, Ammonia Direct		1020	<0.05		mg/L	
Solids, Total Dissolved		1023	<50		mg/L	
Arsenic, Dissolved, ICPMS		594	<0.0050		mg/L	
Arsenic, Dissolved, ICPMS		601	<0.0050		mg/L	

Advisory Control Limits for Blanks:

Metals/Wet Chemistry/ Conventional/GC - all compounds should be less than the Reporting Limit.

GC/MS - Semi-Volatiles - all compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the reporting limit.

Volatiles - Toluene, methylene chloride, acetone and chloroform should be less than 5 times the Reporting Limit. All other volatile compounds should be less than the Reporting Limit.

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QUALITY CONTROL REPORT LABORATORY CONTROL STANDARD

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02/14/2000

Job Number: 00.01064

Analyte	Prep Batch Number	Run Batch Number	LCS True Concentration	LCS Concentration Observed	LCS Units	% Recovery	Flag
Solids, Total Dissolved		1023	330.	330	mg/L	100	

LCS - Laboratory Control Standard

Advisory Control Limits : Inorganics statistical limits are established at the mean +/- 3 standard deviations.
If, statistical limits are not established the LCS should be 80 - 120 % recovery.

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QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

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02/14/2000

Job Number: 00.01064

Analyte	Prep	Run	Matrix			%	MSD			%	Rec.	RPD	Fla
	Batch	Batch	Spike	Sample	Spike		MSD	Spike	Amount				
	Number	Number	Result	Result	Amount		Rec.	Result	Amount	Units			
Nitrogen, Ammonia Direct		1019	0.54	<0.05	0.50	mg/L	108	0.53	0.50	mg/L	106	1.9	
Nitrogen, Ammonia Direct		1020	27.0	12.0	15.0	mg/L	100	27.0	15.0	mg/L	100	0	
Arsenic, Dissolved, ICPMS		601	0.241	0.133	0.100	mg/L	108	0.241	0.100	mg/L	108	0	

NOTE: Matrix Spike Samples may not be samples from this job.

MS = Matrix Spike

MSD = Matrix Spike Duplicate

RPD = Relative Percent Difference

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PAGE 11 of 12

QUALITY CONTROL REPORT DUPLICATES

William G. Petruzzi
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Suite 300
Toledo, OH 43614

02/14/2000

Job Number: 00.01064

Analyte	Prep	Run				RPD	Flag
	Batch	Batch	Original	Duplicate	Units		
Solids, Total Dissolved	Number	Number	Analysis	Analysis	mg/L	0.2	

NOTE: Spikes and Duplicates may not be samples from this job.

RPD - Relative Percent Difference

Advisory Control Limits for Duplicates - RPD should be less than 20.

QUALITY CONTROL FLAG DEFINITIONS

Job Number: 00.01064

(*) Indicates an out-of-control QC. The analytical data was reported based on other supporting quality control information.

(Note) Indicates to review the notes and comments section of the analytical report as there is additional information concerning this analytical result.

(MS) Indicates that the Matrix Spike (MS) was out of statistical advisory limits.

(MSD) Indicates that the Matrix Spike Duplicate (MSD) was out of statistical advisory limits.

(RPD) Indicates that the Relative Percent Difference (RPD) for the MS/MSD pair was outside of statistical advisory limits.

(SS) Indicates that the MS and MSD were out of statistical advisory limits.

(SSR) Indicates that the MS, MSD and RPD were out of statistical advisory limits.

(MSR) Indicates that the MS and RPD were out of statistical advisory limits.

(MSDR) Indicates that the MSD and RPD were out of statistical advisory limits.

(DL) Indicates that the MS and MSD were diluted out and the percent recoveries of the spikes could not be calculated.

(LS) Indicates that statistical accuracy and precision data is not available for spike concentrations which are < 1/4 of the sample amount. Care should be used in interpreting this data.

(J) Indicates estimated concentration due to internal standard areas or surrogate recoveries outside of control limits. A sample matrix effect is usually indicated.

(DW) Indicates Dry Weight.

Analytical Reporting Limits

The reporting limits listed for non-aqueous samples in the analytical report section are Practical Quantitation Limits (PQLs). These PQLs are based upon a typical standard weight used for a non-aqueous sample. The reporting limit for a sample may be different from the PQL listed depending upon the actual weight of sample used, the samples moisture content and any dilutions used during the analysis.

ANALYTICAL AND QUALITY CONTROL REPORT

William G. Petruzzi
HULL & ASSOC. (Toledo)
3401 Glendale Ave.
Suite 300
Toledo, OH 43614

02/23/2000

Job Number: 00.01545

Enclosed is the Analytical and Quality Control reports for the following samples submitted to the Dayton Division of TestAmerica, Inc. for analysis:

<u>Sample Number</u>	<u>Sample Description</u>	<u>Date Taken</u>	<u>Date Received</u>
587768	ALB025:RW04:G002:340	02/03/2000	02/04/2000
587769	ALB025:RW06:G002:340	02/03/2000	02/04/2000
587770	ALB025:RW07:G001A:340	02/03/2000	02/04/2000
587771	ALB025:RW07:G001B:340	02/03/2000	02/04/2000
587772	ALB025:RW07:G001MS:340	02/03/2000	02/04/2000
587773	ALB025:RW07:G001MSD:340	02/03/2000	02/04/2000
587774	ALB025:FB2:W002:340	02/03/2000	02/04/2000
587775	ALB025:TB1:W002:340	02/03/2000	02/04/2000

The Quality Control report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

TestAmerica, Inc. certifies that the analytical results contained herein apply only to the specific samples analyzed.

Reproduction of this analytical report is permitted only in its entirety.

Enclosure


Approved By

TestAmerica

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ANALYTICAL REPORT

William G. Petruzzi
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 Suite 300
 Toledo, OH 43614

02/23/2000

Job Number: 00.01545

Client Project ID: Albion-Sheridan Landfill

SAMPLE NO.	SAMPLE DESCRIPTION	Result	Flag	Units	Prep	Run	Reporting Analyst	Initials	Method Reference
					Date Analyzed	Batch Number			
587768	ALB025:RW04:G002:340								
Nitrogen, Ammonia Direct	0.15	mg/L		02/08/2000	1022	<0.05	kkh		EPA 350.1
Solids, Total Dissolved	402	mg/L		02/04/2000	1026	<50	cdc		EPA 160.1
Conductivity (On Site)	737	umhos/cm		02/03/2000	188		kbh		
eH (On Site)	-24	millivts		02/03/2000	6		kbh		
Oxygen, Dissolved (On Site)	1.41	mg/L		02/03/2000	46		kbh		
pH (On Site)	7.45	S.U.		02/03/2000	464		kbh		
Temperature (On Site)	13.5	Degree C		02/03/2000	193		kbh		
ICPMS DISSOLVED METALS	Complete			02/16/2000	424	Complete	ekh		SW 6020
Aluminum, Dissolved, ICPMS	<0.10	mg/L		02/15/2000	645	<0.10	ekh		SW 6020
Antimony, Diss., ICPMS	<0.0050	mg/L		02/16/2000	618	<0.0050	ekh		SW 6020
Arsenic, Dissolved, ICPMS	<0.0050	mg/L		02/15/2000	602	<0.0050	ekh		SW 6020
Cobalt, Diss., ICPMS	<0.010	mg/L		02/15/2000	629	<0.010	ekh		SW 6020
Manganese, Dissolved, ICPMS	0.052	mg/L		02/15/2000	667	<0.020	ekh		SW 6020
Nickel, Dissolved, ICPMS	<0.050	mg/L		02/15/2000	632	<0.050	ekh		SW 6020
VOLATILE COMPOUNDS - 8260 (AQ)									
8260 - SW846 (AQ)	Complete			02/08/2000	2296	Complete	jpf		
Benzene	<5.0	ug/L		02/08/2000	2296	<5.0	jpf		SW 8260A
Vinyl Chloride	<1.0	ug/L		02/08/2000	2296	<1.0	jpf		SW 8260A
Surrogate:d4-1,2-DCA	101	\$		02/08/2000	2296		jpf		SW 8260A
Surrogate:Dibromofluoromethane	101	\$		02/08/2000	2296		jpf		SW 8260A
Surrogate:Toluene-d8	99	\$		02/08/2000	2296		jpf		SW 8260A
Surrogate:Bromofluorobenzene	99	\$		02/08/2000	2296		jpf		SW 8260A
VOLATILES - 504.1									
1,2-Dibromo-3-chloropropane	<1.0	ug/L		02/09/2000	303	<1.0	bmh		EPA 504.1

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ANALYTICAL REPORT

William G. Petruzzi
 HULL & ASSOC. (Toledo)
 3401 Glendale Ave.
 Suite 300
 Toledo, OH 43614

02/23/2000

Job Number: 00.01545

Client Project ID: Albion-Sheridan Landfill

SAMPLE NO.	SAMPLE DESCRIPTION	Result	Flag	Units	Prep	Run	Reporting Initials	Analyst Method Reference
					Date Analyzed	Batch Number		
587769	ALB025:RW06:G002:340							
Nitrogen, Ammonia Direct	<0.05	mg/L		02/08/2000	1022	<0.05	kkh	EPA 350.1
Solids, Total Dissolved	475	mg/L		02/04/2000	1026	<50	cdc	EPA 160.1
Conductivity (On Site)	865	umhos/cm		02/03/2000	188		kbh	
eH (On Site)	-37	millivts		02/03/2000	6		kbh	
Oxygen, Dissolved (On Site)	3.38	mg/L		02/03/2000	46		kbh	
pH (On Site)	7.69	S.U.		02/03/2000	464		kbh	
Temperature (On Site)	8.30	Degree C		02/03/2000	193		kbh	
ICPMS DISSOLVED METALS	Complete			02/15/2000	424	Complete	ekh	SW 6020
Aluminum, Dissolved, ICPMS	<0.10	mg/L		02/15/2000	645	<0.10	ekh	SW 6020
Antimony, Diss., ICPMS	<0.0050	mg/L		02/15/2000	616	<0.0050	ekh	SW 6020
Arsenic, Dissolved, ICPMS	<0.0050	mg/L		02/15/2000	602	<0.0050	ekh	SW 6020
Cobalt, Diss., ICPMS	<0.010	mg/L		02/15/2000	629	<0.010	ekh	SW 6020
Manganese, Dissolved, ICPMS	0.047	mg/L		02/15/2000	667	<0.020	ekh	SW 6020
Nickel, Dissolved, ICPMS	<0.050	mg/L		02/15/2000	632	<0.050	ekh	SW 6020
VOLATILE COMPOUNDS - 8260 (AQ)								
8260 - SW846 (AQ)	Complete			02/08/2000	2296	Complete	jpf	
Benzene	<5.0	ug/L		02/08/2000	2296	<5.0	jpf	SW 8260A
Vinyl Chloride	<1.0	ug/L		02/08/2000	2296	<1.0	jpf	SW 8260A
Surrogate:d4-1,2-DCA	100	%		02/08/2000	2296		jpf	SW 8260A
Surrogate:Dibromofluoromethane	101	%		02/08/2000	2296		jpf	SW 8260A
Surrogate:Toluene-d8	99	%		02/08/2000	2296		jpf	SW 8260A
Surrogate:Bromofluorobenzene	99	%		02/08/2000	2296		jpf	SW 8260A
VOLATILES - 504.1								
1,2-Dibromo-3-chloropropane	<1.0	ug/L		02/09/2000	303	<1.0	bmh	EPA 504.1



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ANALYTICAL REPORT

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Toledo, OH 43614

02/23/2000

Job Number: 00.01545

Client Project ID: Albion-Sheridan Landfill

Result	Flag	Units	Date	Prep	Run	Reporting Limit	Analyst Initials	Method Reference			
			Analyzed	Batch Number	Batch Number						
SAMPLE NO.	SAMPLE DESCRIPTION					DATE/TIME TAKEN					
587770	ALB025:RW07:G001A:340					02/03/2000 15:35					
Nitrogen, Ammonia Direct	<0.05	mg/L	02/08/2000	1022	<0.05	kkh	EPA 350.1				
Solids, Total Dissolved	357	mg/L	02/04/2000	1026	<50	cdc	EPA 160.1				
Conductivity (On Site)	664	umhos/cm	02/03/2000	188		kbh					
eH (On Site)	-30	millivts	02/03/2000	6		kbh					
Oxygen, Dissolved (On Site)	0.53	mg/L	02/03/2000	46		kbh					
pH (On Site)	7.56	S.U.	02/03/2000	464		kbh					
Temperature (On Site)	10.3	Degree C	02/03/2000	193		kbh					
ICPMS DISSOLVED METALS	Complete		02/15/2000	424	Complete	ekh	SW 6020				
Aluminum, Dissolved, ICPMS	<0.10	mg/L	02/15/2000	645	<0.10	ekh	SW 6020				
Antimony, Diss., ICPMS	<0.0050	mg/L	02/15/2000	616	<0.0050	ekh	SW 6020				
Arsenic, Dissolved, ICPMS	<0.0050	mg/L	02/15/2000	602	<0.0050	ekh	SW 6020				
Cobalt, Diss., ICPMS	<0.010	mg/L	02/15/2000	629	<0.010	ekh	SW 6020				
Manganese, Dissolved, ICPMS	0.034	mg/L	02/15/2000	667	<0.020	ekh	SW 6020				
Nickel, Dissolved, ICPMS	<0.050	mg/L	02/15/2000	632	<0.050	ekh	SW 6020				
VOLATILE COMPOUNDS - 8260 (AQ)											
8260 - SW846 (AQ)	Complete		02/08/2000	2296	Complete	jpf					
Benzene	<5.0	ug/L	02/08/2000	2296	<5.0	jpf	SW 8260A				
Vinyl Chloride	<1.0	ug/L	02/08/2000	2296	<1.0	jpf	SW 8260A				
Surrogate:d4-1,2-DCA	99	¶	02/08/2000	2296		jpf	SW 8260A				
Surrogate:Dibromofluoromethane	100	¶	02/08/2000	2296		jpf	SW 8260A				
Surrogate:Toluene-d8	99	¶	02/08/2000	2296		jpf	SW 8260A				
Surrogate:Bromofluorobenzene	99	¶	02/08/2000	2296		jpf	SW 8260A				
VOLATILES - 504.1											
1,2-Dibromo-3-chloropropane	<1.0	ug/L	02/09/2000	303	<1.0	bmh	EPA 504.1				



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ANALYTICAL REPORT

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3401 Glendale Ave.
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02/23/2000

Job Number: 00.01545

Client Project ID: Albion-Sheridan Landfill

SAMPLE NO.	SAMPLE DESCRIPTION	Result	Flag	Units	Prep	Run	Reporting Initials	Analyst	Method Reference
					Date Analyzed	Batch Number			
587771	ALB025:RW07:G001B:340								
Nitrogen, Ammonia Direct	<0.05	mg/L		02/08/2000	1022	<0.05	kkh	EPA 350.1	
Solids, Total Dissolved	368	mg/L		02/04/2000	1026	<50	cdc	EPA 160.1	
Conductivity (On Site)	664	umhos/cm		02/03/2000	188		kbh		
eH (On Site)	-30	millivts		02/03/2000	6		kbh		
Oxygen, Dissolved (On Site)	0.53	mg/L		02/03/2000	46		kbh		
pH (On Site)	7.56	S.U.		02/03/2000	464		kbh		
Temperature (On Site)	10.3	Degree C		02/03/2000	193		kbh		
ICPMS DISSOLVED METALS	Complete			02/15/2000	424	Complete	ekh	SW 6020	
Aluminum, Dissolved, ICPMS	<0.10	mg/L		02/15/2000	645	<0.10	ekh	SW 6020	
Antimony, Diss., ICPMS	<0.0050	mg/L		02/15/2000	616	<0.0050	ekh	SW 6020	
Arsenic, Dissolved, ICPMS	<0.0050	mg/L		02/15/2000	602	<0.0050	ekh	SW 6020	
Cobalt, Diss., ICPMS	<0.010	mg/L		02/15/2000	629	<0.010	ekh	SW 6020	
Manganese, Dissolved, ICPMS	0.034	mg/L		02/15/2000	667	<0.020	ekh	SW 6020	
Nickel, Dissolved, ICPMS	<0.050	mg/L		02/15/2000	632	<0.050	ekh	SW 6020	
VOLATILE COMPOUNDS - 8260 (AQ)									
8260 - SW846 (AQ)	Complete			02/08/2000	2296	Complete	jpf		
Benzene	<5.0	ug/L		02/08/2000	2296	<5.0	jpf	SW 8260A	
Vinyl Chloride	<1.0	ug/L		02/08/2000	2296	<1.0	jpf	SW 8260A	
Surrogate:d4-1,2-DCA	101	¶		02/08/2000	2296		jpf	SW 8260A	
Surrogate:Dibromofluoromethane	101	¶		02/08/2000	2296		jpf	SW 8260A	
Surrogate:Toluene-d8	98	¶		02/08/2000	2296		jpf	SW 8260A	
Surrogate:Bromofluorobenzene	99	¶		02/08/2000	2296		jpf	SW 8260A	
VOLATILES - 504.1									
1,2-Dibromo-3-chloropropane	<1.0	ug/L		02/09/2000	303	<1.0	bmh	EPA 504.1	

ANALYTICAL REPORT

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 3401 Glendale Ave.
 Suite 300
 Toledo, OH 43614

02/23/2000

Job Number: 00.01545

Client Project ID: Albion-Sheridan Landfill

Result	Flag	Units	Date Analyzed	Prep	Run	Reporting Limit	Analyst Initials	Method Reference			
				Batch Number	Batch Number						
SAMPLE NO.	SAMPLE DESCRIPTION					DATE/TIME TAKEN					
587772	ALB025:RW07:G001MS:340					02/03/2000 15:35					
Nitrogen, Ammonia Direct	96 %	Recovery	02/08/2000	1022	<0.05	kkh	EPA 350.1				
ICPMS DISSOLVED METALS	Complete		02/15/2000	424	Complete	ekh	SW 6020				
Aluminum, Dissolved, ICPMS	96 %	Recovery	02/15/2000	645	<0.10	ekh	SW 6020				
Antimony, Diss., ICPMS	98 %	Recovery	02/15/2000	616	<0.0050	ekh	SW 6020				
Arsenic, Dissolved, ICPMS	106 %	Recovery	02/15/2000	602	<0.0050	ekh	SW 6020				
Cobalt, Diss., ICPMS	97 %	Recovery	02/15/2000	629	<0.010	ekh	SW 6020				
Manganese, Dissolved, ICPMS	98 %	Recovery	02/15/2000	667	<0.020	ekh	SW 6020				
Nickel, Dissolved, ICPMS	97 %	Recovery	02/15/2000	632	<0.050	ekh	SW 6020				
VOLATILE COMPOUNDS - 8260 (AQ)											
8260 - SW846 (AQ)	Complete		02/08/2000	2296	Complete	jpf					
Benzene	113 %	Recovery	02/08/2000	2296	<5.0	jpf	SW 8260A				
Vinyl Chloride	133 %	Recovery	02/08/2000	2296	<1.0	jpf	SW 8260A				
Surrogate:d4-1,2-DCA	103 %		02/08/2000	2296		jpf	SW 8260A				
Surrogate:Dibromofluoromethane	104 %		02/08/2000	2296		jpf	SW 8260A				
Surrogate:Toluene-d8	99 %		02/08/2000	2296		jpf	SW 8260A				
Surrogate:Bromofluorobenzene	101 %		02/08/2000	2296		jpf	SW 8260A				
VOLATILES - 504.1											
1,2-Dibromo-3-chloropropane	112 %	Recovery	02/09/2000	303	<1.0	bmh	EPA 504.1				

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ANALYTICAL REPORT

William G. Petruzzi
 HULL & ASSOC. (Toledo)
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 Suite 300
 Toledo, OH 43614

02/23/2000

Job Number: 00.01545

Client Project ID: Albion-Sheridan Landfill

SAMPLE NO.	SAMPLE DESCRIPTION		Prep	Run	Reporting Analyst	Initials	Method Reference
			Date Analyzed	Batch Number			
587773	ALB025:RW07:G001MSD:340						
Nitrogen, Ammonia Direct	96 %	Recovery	02/08/2000	1022	<0.05	kkh	EPA 350.1
ICPMS DISSOLVED METALS	Complete		02/15/2000	424	Complete	ekh	SW 6020
Aluminum, Dissolved, ICPMS	97 %	Recovery	02/15/2000	645	<0.10	ekh	SW 6020
Antimony, Diss., ICPMS	97 %	Recovery	02/15/2000	616	<0.0050	ekh	SW 6020
Arsenic, Dissolved, ICPMS	108 %	Recovery	02/15/2000	602	<0.0050	ekh	SW 6020
Cobalt, Diss., ICPMS	97 %	Recovery	02/15/2000	629	<0.010	ekh	SW 6020
Manganese, Dissolved, ICPMS	99 %	Recovery	02/15/2000	667	<0.020	ekh	SW 6020
Nickel, Dissolved, ICPMS	97 %	Recovery	02/15/2000	632	<0.050	ekh	SW 6020
VOLATILE COMPOUNDS - 8260 (AQ)							
8260 - SW846 (AQ)	Complete		02/08/2000	2296	Complete	jpf	
Benzene	125 %	Recovery	02/08/2000	2296	<5.0	jpf	SW 8260A
Vinyl Chloride	138 %	Recovery	02/08/2000	2296	<1.0	jpf	SW 8260A
Surrogate:d4-1,2-DCA	101	%	02/08/2000	2296		jpf	SW 8260A
Surrogate:Dibromofluoromethane	103	%	02/08/2000	2296		jpf	SW 8260A
Surrogate:Toluene-d8	99	%	02/08/2000	2296		jpf	SW 8260A
Surrogate:Bromofluorobenzene	101	%	02/08/2000	2296		jpf	SW 8260A
VOLATILES - 504.1							
1,2-Dibromo-3-chloropropane	110 %	Recovery	02/09/2000	303	<1.0	bmh	EPA 504.1

ANALYTICAL REPORT

William G. Petruzzi
 HULL & ASSOC. (Toledo)
 3401 Glendale Ave.
 Suite 300
 Toledo, OH 43614

02/23/2000

Job Number: 00.01545

Client Project ID: Albion-Sheridan Landfill

Result	Flag	Units	Prep	Run	Reporting Initials	Analyst	Method Reference
			Date Analyzed	Batch Number			
SAMPLE NO.		SAMPLE DESCRIPTION				DATE/TIME TAKEN	
587774		ALB025:FB2:W002:340				02/03/2000	15:00
Nitrogen, Ammonia Direct	<0.05	mg/L	02/08/2000	1022	<0.05	kkh	EPA 350.1
Solids, Total Dissolved	<50	mg/L	02/04/2000	1026	<50	cdc	EPA 160.1
ICPMS DISSOLVED METALS	Complete		02/15/2000	424	Complete	ekh	SW 6020
Aluminum, Dissolved, ICPMS	<0.10	mg/L	02/15/2000	645	<0.10	ekh	SW 6020
Antimony, Diss., ICPMS	<0.0050	mg/L	02/15/2000	616	<0.0050	ekh	SW 6020
Arsenic, Dissolved, ICPMS	<0.0050	mg/L	02/15/2000	602	<0.0050	ekh	SW 6020
Cobalt, Diss., ICPMS	<0.010	mg/L	02/15/2000	629	<0.010	ekh	SW 6020
Manganese, Dissolved, ICPMS	<0.020	mg/L	02/15/2000	667	<0.020	ekh	SW 6020
Nickel, Dissolved, ICPMS	<0.050	mg/L	02/15/2000	632	<0.050	ekh	SW 6020
VOLATILE COMPOUNDS - 8260 (AQ)							
8260 - SW846 (AQ)	Complete		02/08/2000	2296	Complete	jpf	
Benzene	<5.0	ug/L	02/08/2000	2296	<5.0	jpf	SW 8260A
Vinyl Chloride	<1.0	ug/L	02/08/2000	2296	<1.0	jpf	SW 8260A
Surrogate:d4-1,2-DCA	100	†	02/08/2000	2296		jpf	SW 8260A
Surrogate:Dibromofluoromethane	100	†	02/08/2000	2296		jpf	SW 8260A
Surrogate:Toluene-d8	98	†	02/08/2000	2296		jpf	SW 8260A
Surrogate:Bromofluorobenzene	97	†	02/08/2000	2296		jpf	SW 8260A
VOLATILES - 504.1							
1,2-Dibromo-3-chloropropane	<1.0	ug/L	02/09/2000	303	<1.0	bmh	EPA 504.1

ANALYTICAL REPORT

William G. Petruzzi
HULL & ASSOC. (Toledo)
3401 Glendale Ave.
Suite 300
Toledo, OH 43614

02/23/2000

Job Number: 00.01545

Client Project ID: Albion-Sheridan Landfill

Result	Flag	Units	Prep	Run	Reporting Number	Analyst Initials	Method Reference			
			Date Analyzed	Batch Number						
SAMPLE NO.	SAMPLE DESCRIPTION						DATE/TIME TAKEN			
587775	ALB025:TB1:W002:340						02/03/2000			
VOLATILE COMPOUNDS - 8260 (AQ)										
8260 - SW846 (AQ)	Complete		02/08/2000	2296	Complete	jpf				
Benzene	<5.0	ug/L	02/08/2000	2296	<5.0	jpf	SW 8260A			
Vinyl Chloride	<1.0	ug/L	02/08/2000	2296	<1.0	jpf	SW 8260A			
Surrogate:d4-1,2-DCA	99	%	02/08/2000	2296		jpf	SW 8260A			
Surrogate:Dibromofluoromethane	101	%	02/08/2000	2296		jpf	SW 8260A			
Surrogate:Toluene-d8	99	%	02/08/2000	2296		jpf	SW 8260A			
Surrogate:Bromofluorobenzene	96	%	02/08/2000	2296		jpf	SW 8260A			
VOLATILES - 504.1										
1,2-Dibromo-3-chloropropane	<1.0	ug/L	02/09/2000	303	<1.0	bmh	EPA 504.1			

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QUALITY CONTROL REPORT CONTINUING CALIBRATION VERIFICATION

William G. Petruzzi
HULL & ASSOC. (Toledo)
3401 Glendale Ave.
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Toledo, OH 43614

02/23/2000

Job Number: 00.01545

Analyte	Prep Batch Number	Run Batch Number	CCV True Concentration	CCV Concentration Observed	Flag	Units	Percent Recovery
Nitrogen, Ammonia Direct	1022	0.50	0.50			mg/L	100
Aluminum, Dissolved, ICPMS	645	0.050	0.050			mg/L	100
Antimony, Diss., ICPMS	616	0.050	0.052			mg/L	104
Antimony, Diss., ICPMS	618	0.050	0.051			mg/L	102
Arsenic, Dissolved, ICPMS	602	0.050	0.049			mg/L	98
Cobalt, Diss., ICPMS	629	0.050	0.050			mg/L	100
Manganese, Dissolved, ICPMS	667	0.050	0.050			mg/L	100
Nickel, Dissolved, ICPMS	632	0.050	0.050			mg/L	100
VOLATILE COMPOUNDS - 8260 (AQ)							
Benzene	2296	50	49.5			ug/L	99
Vinyl Chloride	2296	50	54.8			ug/L	110
VOLATILES - 504.1							
1,2-Dibromo-3-chloropropane	303	0.20	0.205			ug/L	102

CCV - Continuing Calibration Verification

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QUALITY CONTROL REPORT BLANKS

William G. Petruzzi
 HULL & ASSOC. (Toledo)
 3401 Glendale Ave.
 Suite 300
 Toledo, OH 43614

02/23/2000

Job Number: 00.01545

Analyte	Prep Batch Number	Run Batch Number	Blank Analysis	Flag	Units	Date Prepped
Nitrogen, Ammonia Direct		1022	<0.05		mg/L	
Solids, Total Dissolved		1026	<50		mg/L	
Aluminum, Dissolved, ICPMS		645	<0.10		mg/L	
Antimony, Diss., ICPMS		616	<0.0050		mg/L	
Antimony, Diss., ICPMS		618	<0.0050		mg/L	
Arsenic, Dissolved, ICPMS		602	<0.0050		mg/L	
Cobalt, Diss., ICPMS		629	<0.010		mg/L	
Manganese, Dissolved, ICPMS		667	<0.020		mg/L	
Nickel, Dissolved, ICPMS		632	<0.050		mg/L	
VOLATILE COMPOUNDS - 8260 (AQ)						
Benzene		2296	<1.0		ug/L	
Vinyl Chloride		2296	<1.0		ug/L	
Surrogate:d4-1,2-DCA		2296	103	t		
Surrogate:Dibromofluoromethane		2296	102	t		
Surrogate:Toluene-d8		2296	98	t		
Surrogate:Bromofluorobenzene		2296	97	t		
VOLATILES - 504.1						
1,2-Dibromo-3-chloropropane		303	<1.0		ug/L	

Advisory Control Limits for Blanks:

Metals/Wet Chemistry/ Conventional/GC - all compounds should be less than the Reporting Limit.

GC/MS - Semi-Volatiles - all compounds should be less than the Reporting Limit except for phthalates which should be less than 5 times the reporting limit.

Volatiles - Toluene, methylene chloride, acetone and chloroform should be less than 5 times the Reporting Limit. All other volatile compounds should be less than the Reporting Limit.

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QUALITY CONTROL REPORT LABORATORY CONTROL STANDARD

William G. Petruzzi
HULL & ASSOC. (Toledo)
3401 Glendale Ave.
Suite 300
Toledo, OH 43614

02/23/2000

Job Number: 00.01545

Analyte	Prep Batch Number	Run Batch Number	LCS True Concentration	LCS Concentration Observed	Units	LCS % Recovery	Flag
Solids, Total Dissolved	1026	330.		298	mg/L	90	
VOLATILE COMPOUNDS - 8260 (AQ)							
Benzene	2296	20		20.5	ug/L	102	
Vinyl Chloride	2296	20		22.1	ug/L	110	
Surrogate:d4-1,2-DCA	2296	50		49.9	%	100	
Surrogate:Dibromofluoromethane	2296	50		51.2	%	102	
Surrogate:Toluene-d8	2296	50		48.8	%	98	
Surrogate:Bromofluorobenzene	2296	50		48.4	%	97	
VOLATILES - 504.1							
1,2-Dibromo-3-chloropropane	303	0.20		0.212	ug/L	106	

LCS - Laboratory Control Standard

Advisory Control Limits : Inorganics statistical limits are established at the mean +/- 3 standard deviations.
If statistical limits are not established the LCS should be 80 - 120 % recovery.

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QUALITY CONTROL REPORT MATRIX SPIKE/MATRIX SPIKE DUPLICATE

William G. Petruzzii
HULL & ASSOC. (Toledo)
3401 Glendale Ave.
Suite 300
Toledo, OH 43614

02/23/2000

Job Number: 00.01545

Analyte	Prep	Run	Matrix			%	MSD			%		
	Batch	Batch	Spike	Sample	Spike		MSD	Spike	MSD			
	Number	Number	Result	Result	Amount		Rec.	Result	Amount			
Nitrogen, Ammonia Direct		1022	0.48	<0.05	0.50	mg/L	96	0.48	0.50	mg/L	96	0
Aluminum, Dissolved, ICPMS		645	0.480	<0.10	0.500	mg/L	96	0.485	0.500	mg/L	97	1
Antimony, Diss., ICPMS		616	0.490	<0.0050	0.500	mg/L	98	0.485	0.500	mg/L	97	1
Arsenic, Dissolved, ICPMS		602	0.530	<0.0050	0.500	mg/L	106	0.540	0.500	mg/L	108	1.9
Cobalt, Diss., ICPMS		629	0.485	<0.010	0.500	mg/L	97	0.485	0.500	mg/L	97	0
Manganese, Dissolved, ICPMS		667	0.522	0.034	0.500	mg/L	98	0.527	0.500	mg/L	99	1
Nickel, Dissolved, ICPMS		632	0.485	<0.050	0.500	mg/L	97	0.485	0.500	mg/L	97	0
VOLATILE COMPOUNDS - 8260 (AQ)												
Benzene		2296	22.7	<1.0	20	ug/L	113	24.9	20	ug/L	125	8.3
Vinyl Chloride		2296	26.6	<1.0	20	ug/L	133	27.6	20	ug/L	138	3.7
VOLATILES - 504.1												
1,2-Dibromo-3-chloropropane		303	0.224	<1.0	0.20	ug/L	112	0.219	0.20	ug/L	110	2.2

MS = Matrix Spike

MSD = Matrix Spike Duplicate

RPD = Relative Percent Difference

TestAmerica

INCORPORATED

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QUALITY CONTROL REPORT DUPLICATES

William G. Petruzzi
HULL & ASSOC. (Toledo)
3401 Glendale Ave.
Suite 300
Toledo, OH 43614

02/23/2000

Job Number: 00.01545

Analyte	Prep Batch Number	Run Batch Number	Original Analysis	Duplicate Analysis	Units	RPD	Flag
Solids, Total Dissolved	1026	381	383	mg/L	0.5		

NOTE: Duplicates may not be samples from this job.

RPD - Relative Percent Difference

Advisory Control Limits for Duplicates - RPD should be less than 20.

QUALITY CONTROL FLAG DEFINITIONS

Job Number: 00.01545

(*) Indicates an out-of-control QC. The analytical data was reported based on other supporting quality control information.

(Note) Indicates to review the notes and comments section of the analytical report as there is additional information concerning this analytical result.

(MS) Indicates that the Matrix Spike (MS) was out of statistical advisory limits.

(MSD) Indicates that the Matrix Spike Duplicate (MSD) was out of statistical advisory limits.

(RPD) Indicates that the Relative Percent Difference (RPD) for the MS/MSD pair was outside of statistical advisory limits.

(SS) Indicates that the MS and MSD were out of statistical advisory limits.

(SSR) Indicates that the MS, MSD and RPD were out of statistical advisory limits.

(MSR) Indicates that the MS and RPD were out of statistical advisory limits.

(MSDR) Indicates that the MSD and RPD were out of statistical advisory limits.

(DL) Indicates that the MS and MSD were diluted out and the percent recoveries of the spikes could not be calculated.

(LS) Indicates that statistical accuracy and precision data is not available for spike concentrations which are < 1/4 of the sample amount. Care should be used in interpreting this data.

(J) Indicates estimated concentration due to internal standard areas or surrogate recoveries outside of control limits. A sample matrix effect is usually indicated.

(DW) Indicates Dry Weight.

Analytical Reporting Limits

The reporting limits listed for non-aqueous samples in the analytical report section are Practical Quantitation Limits (PQLs). These PQLs are based upon a typical standard weight used for a non-aqueous sample. The reporting limit for a sample may be different from the PQL listed depending upon the actual weight of sample used, the samples moisture content and any dilutions used during the analysis.

ATTACHMENT A-2

Ground-water Monitor Well Field Data Sheets
for the January/February 2000 Sampling Event



Hull B. Associates, Inc.
3401 Glendale Ave.
Suite 300
Toledo, Ohio 43614
Telephone (419) 385-2048
Fax (419) 385-5487

GROUND-WATER MONITOR WELL DATA SHEET

Monitor Well ID: MW02SB

FACILITY INFORMATION

Name: Albion-Sheridan Twp Landfill Project No.: ALB025
Address: 29975 East Erie Road, Albion, Michigan 49224
Contact: Leroy Schmidt Telephone: (517) 629-5535

MONITOR WELL DATA

Coordinates: 7150 N Condition of Well: OK
5100 E
Casing Material/Diameter: PVC / 2"
Ground Surface Elevation: —
Total Depth: —
(From Ground Surface)
Screened Interval: —
(Including Sand Pack)
Screened Formation: Shallow Bedrock
Top of Casing Elevation: 477.62'
Total Depth: (From Top of Casing) 68.66'
Screened Interval: (Screen Only) 912.62' - 917.62'

WEATHER CONDITIONS

Weather: Cloudy / Snow Flurries Temperature: 15°F
Barometric Pressure: — Wind Direction: W

FIELD MEASURED PARAMETERS

Personnel Present: D. Benecke, S. Ferguson
Measured Total Depth: 68.66'
(From Top of Casing)
Volume of Static Water: 6.5 gal
Static Water Level: 29.02'
(From Top of Casing)
Ground-Water Elevation: 948.60'

PURGING DATA

Date of Purging: 1/25/00 Time of Purging: 1320
Purging Method: Kick pump Volume Purged: 21 gal
Purging Rate: ≈ 1 gal/min

Well Volumes Purged					
	initial	1	2	3	4
pH	7.34	7.32	7.39	7.46	
Temp.	9.0	9.8	9.8	10.0	
Spec. Cond.					
Corr. Cond.	989	1111	1108	1108	
Redox. Pot.				-22mV	
D.O.				0.59 mg/L	
Turbidity	0	0	0	0	

Volume-to-Purge Calculation Table

Well Casing Dia. (in.)	Gallons Per Ft. of Depth	Feet of Standing Water	3 Well Volumes	Gallons to Purge
2	0.163	× 39.64'	X 3	= 19.5
4	0.653	X	X 3	=
6	1.469	X	X 3	=

SAMPLING DATA

Date of Sampling: 1/25/00 Time of Sampling: 1340
Sampling Method: Disp. Bailer
Static Water Level: 29.10'
(At Time of Sampling)

Final/Additional Well Volumes				
	1	2	3	4
pH	7.46			
Temp.	10.0			
Spec. Cond.				
Corr. Cond.	1108			
Redox. Pot.	-22mV			
D.O.	0.59 mg/L			
Turbidity	0			

Notes

Percent Gas: 0

Percent LEL: 0



Hull & Associates, Inc.
3401 Glendale Ave.
Suite 300
Toledo, Ohio 43614
Telephone (419) 385-2016
Fax (419) 385-5487

GROUND-WATER MONITOR WELL DATA SHEET

Monitor Well ID: MW 4SB

FACILITY INFORMATION

Name: Albion-Sheridan Twp. Landfill Project No.: ALB005
Address: 29975 East Erie Rd., Albion, Michigan 49224
Contact: Leroy Schmidt Telephone: (517) 629-5535

MONITOR WELL DATA

Coordinates:	5600 N	4300 E	Condition of Well:	Good
Casing Material/Diameter:	PVC / 2"			Screened Formation: Shallow bedrock
Ground Surface Elevation:	-			Top of Casing Elevation: 978.03'
Total Depth:	-			Total Depth: 74.98'
(From Ground Surface)				(From Top of Casing)
Screened Interval:	-			Screened Interval: 905.03' - 910.03'
(Including Sand Pack)				(Screen Only)

WEATHER CONDITIONS

Weather:	Cloudy/snow	Temperature:	13°F
Barometric Pressure:	11	Wind Direction:	W

FIELD MEASURED PARAMETERS

Personnel Present:	S. Ferguson, D. Benecke	Static Water Level:	32.1d'
Measured Total Depth:	74.98'	(From Top of Casing)	
(From Top of Casing)		Ground-Water Elevation:	945.91'
Volume of Static Water:	7 gal		

PURGING DATA

Date of Purging:	1/25/00	Time of Purging:	1650
Purging Method:	KeeK pump	Volume Purged:	22.35 gal
Purging Rate:	≈ 1 gal/min		

Well Volumes Purged					
	Initial	1	2	3	4
pH	9.79	7.47	7.32	7.29	
Temp.	8.4	10.1	10.1	10.5	
Spec. Cond.					
Corr. Cond.	1482	1409	1374	1383	
Redox. Pot.			-12mV		
D.O.			0.80 mg/L		
Turbidity	0	0	0	0	

Volume-to-Purge Calculation Table				
Well Casing Dia. (in.)	Gallons Per Ft. of Depth	Feet of Standing Water	3 Well Volumes	Gallons to Purge
2	0.163	× 42.86	× 3	= 21.0
4	0.653	×	× 3	=
6	1.469	×	× 3	=

SAMPLING DATA

Date of Sampling:	1/25/00	Time of Sampling:	1710
Sampling Method:	Disp. Baileys	Static Water Level:	32.24'
(At Time of Sampling)			

Final/Additional Well Volumes				
	1	2	3	4
pH	7.29			
Temp.	10.5			
Spec. Cond.				
Corr. Cond.	1383			
Redox. Pot.	-12mV			
D.O.	0.80 mg/L			
Turbidity	0			

Notes

Pungent odor

Percent Gas: 0

Percent LEL: 0



Hull & Associates, Inc.
3401 Glendale Ave.
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GROUND-WATER MONITOR WELL DATA SHEET

Monitor Well ID: MW#5SB

FACILITY INFORMATION

Name: Albion - Sheridan Twp Landfill Project No.: AIB025

Address: 29975 East Erie Rd., Albion, Michigan 49224

Contact: Leroy Schmidt Telephone: (517) 629-5535

MONITOR WELL DATA

Coordinates: 5700 N Condition of Well: Good
5300 E

Casing Material/Diameter: PVC / 2"

Ground Surface Elevation: —

Total Depth: —
(From Ground Surface)

Screened Interval:
(Including Sand Pack) —

Screened Formation: Shallow Bedrock

Top of Casing Elevation: 970.01'

Total Depth:
(From Top of Casing) 77.93'

Screened Interval:
(Screen Only) 894.51' - 899.51'

WEATHER CONDITIONS

Weather: Cloudy

Temperature: 15°K

Barometric Pressure: —

Wind Direction: W

FIELD MEASURED PARAMETERS

Personnel Present: S. Ferguson, D. Benecke

Measured Total Depth:
(From Top of Casing) 77.93'

Static Water Level:
(From Top of Casing) 23.34'

Volume of Static Water: 8.9 gal/L

Ground-Water Elevation: 946.67'

PURGING DATA

Date of Purging: 1/25/00

Time of Purging: 14:00

Purging Method: Kick Pump

Volume Purged: 28 gal

Purging Rate: 1 gal/min

Well Volumes Purged					
	Initial	1	2	3	4
pH	7.38	7.38	7.48	7.51	
Temp.	7.2	9.1	9.6	9.6	
Spec. Cond.					
Corr. Cond.	742	741	739	738	
Redox. Pot.			-27mV		
O.O.			0.48 mg/L		
Turbidity	0	0	0	0	

Volume-to-Purge Calculation Table

Well Casing Dia. (in.)	Gallons Per Ft. of Depth	Feet of Standing Water	3 Well Volumes	Gallons to Purge
2	0.163	X 54.6	X 3	= 26.7
4	0.653	X	X 3	=
6	1.469	X	X 3	=

SAMPLING DATA

Date of Sampling: 1/25/00

Time of Sampling: 14:15

Sampling Method: Disp. Ba/ICP

Static Water Level: 23.55'
(At Time of Sampling)

Final/Additional Well Volumes				
	1	2	3	4
pH	7.51			
Temp.	9.6			
Spec. Cond.				
Corr. Cond.	738			
Redox. Pot.	-27mV			
O.O.	0.48 mg/L			
Turbidity	0			

Notes

Field Duplicate

Percent Gas: 0

Percent LEL: 0

Hull & Associates, Inc.
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Toledo, Ohio 43614
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Fax (419) 385-5487

GROUND-WATER MONITOR WELL DATA SHEET

Monitor Well ID: MW 65B

FACILITY INFORMATION

Name: Albion-Sheridan Twp Landfill Project No.: A1B005
Address: 29975 East Erie Rd., Albion, Michigan 49224
Contact: Leroy Schmidt Telephone: (517) 629-5535

MONITOR WELL DATA

Coordinates: 5250 N Condition of Well: Good
4200 E
Casing Material/Diameter: PVC / 2" Screened Formation: Shallow Bedrock
Ground Surface Elevation: - Top of Casing Elevation: 969.77'
Total Depth: - Total Depth: (From Top of Casing) 78.64'
(From Ground Surface) Screened Interval: 844.77' - 899.47'
Screened Interval: (Including Sand Pack) (Screen Only)

WEATHER CONDITIONS

Weather: Cloudy Temperature: 10°F
Barometric Pressure: - Wind Direction: W

FIELD MEASURED PARAMETERS

Personnel Present: S. Ferguson, D. Benecke
Measured Total Depth: 78.64' Static Water Level: 23.84'
(From Top of Casing)
Volume of Static Water: 8.9 gal Ground-Water Elevation: 945.93'

PURGING DATA

Date of Purging: 1/25/00 Time of Purging: 17:30
Purging Method: Keck pump Volume Purged: Dry @ 26,591
Purging Rate: ≈ 1 gal/min

Well Volumes Purged					
	Initial	1	2	3	4
pH	7.45	7.37	7.39	7.44	
Temp.	8.0	8.7	9.5	8.5	
Spec. Cond.					
Corr. Cond.	1180	1149	1147	1146	
Redox. Pot.			-26 mV		
D.O.					
Turbidity	0	0	0	0	

Volume-to-Purge Calculation Table				
Well Casing Dia. (in.)	Gallons Per Ft. of Depth	Feet of Standing Water	3 Well Volumes	Gallons to Purge
2	0.163	X 54.8	X 3	= 26.8
4	0.653	X	X 3	=
6	1.469	X	X 3	=

SAMPLING DATA

Date of Sampling: 1/25/00 Time of Sampling: 1805
Sampling Method: Disp. Baile

Final/Additional Well Volumes				
	1	2	3	4
pH	7.44			
Temp.	8.5			
Spec. Cond.				
Corr. Cond.	1146			
Redox. Pot.	-26 mV			
D.O.	0.71 mg/L			
Turbidity	0			

Notes

Let 15 min. to recharge before sampling

Percent Gas: 0

Percent LEL: 0

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GROUND-WATER MONITOR WELL DATA SHEET

Monitor Well ID: MW 85B

FACILITY INFORMATION

Name: Albion - Sheridan Twp. Landfill Project No.: A 1B 025
Address: 29975 East Erie Rd., Albion, Michigan 49224
Contact: Leroy Schmidt Telephone: (517) 629-5535

MONITOR WELL DATA

Coordinates:	5650	N	Condition of Well:	Good
	3750	E		
Casing Material/Diameter:	PVC 1/2"		Screened Formation:	Shallow Bedrock
Ground Surface Elevation:	—		Top of Casing Elevation:	981.83'
Total Depth:	—		Total Depth:	75.34'
(From Ground Surface)			(From Top of Casing)	
Screened Interval:	—		Screened Interval:	909.83' - 914.83'
(Including Sand Pack)			(Screen Only)	

WEATHER CONDITIONS

Weather: Partly Cloudy Temperature: 15°F
Barometric Pressure: — Wind Direction: W

FIELD MEASURED PARAMETERS

Personnel Present:	S. Ferguson, D. Benecke		
Measured Total Depth:	75.34'	Static Water Level:	35.89'
(From Top of Casing)		(From Top of Casing)	
Volume of Static Water:	6.4 gal	Ground-Water Elevation:	945.82'

PURGING DATA

Date of Purging:	1/25/00	Time of Purging:	1450
Purging Method:	Kock Pump	Volume Purged:	21 gal
Purging Rate:	≈ 1 gal/min		

Well Volumes Purged					
	Initial	1	2	3	4
pH	7.48	7.37	7.36	7.38	
Temp.	4.1	4.3	9.5	9.4	
Spec. Cond.					
Corr. Cond.	956	966	964	960	
Redox. Pot.				-17	mv
D.O.				0.12	mg/L
Turbidity	0	0	0	0	

Volume-to-Purge Calculation Table

Well Casing Dia. (in.)	Gallons Per Ft. of Depth	Feet of Standing Water	3 Well Volumes	Gallons to Purge
2	0.163	X 39.45	X 3	= 19.2
4	0.653	X	X 3	=
6	1.469	X	X 3	=

SAMPLING DATA

Date of Sampling:	1/25/00	Time of Sampling:	1520
Sampling Method:	Disp. Bailev	Static Water Level:	39.04' ↑
		(At Time of Sampling)	

Final/Additional Well Volumes				
	1	2	3	4
pH	7.38			
Temp.	9.4			
Spec. Cond.				
Corr. Cond.	960			
Redox. Pot.	-17MV			
D.O.	0.10 mg/L			
Turbidity	0			

Notes

Percent Gas: 0

Percent LEL: 0

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Suite 300
Toledo, Ohio 43614
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Fax (419) 385-5487

GROUND-WATER MONITOR WELL DATA SHEET

Monitor Well ID: mwq5B

FACILITY INFORMATION

Name: Albion-Sheridan Twp Landfill Project No.: ALB025
Address: 29975 East Erie Rd., Albion, Michigan 49224
Contact: Leroy Schmidt Telephone: (517) 629-5535

MONITOR WELL DATA

Coordinates: 5250 N
3750 E

Casing Material/Diameter: PVC 1/2"

Ground Surface Elevation: —

Total Depth: —
(From Ground Surface)

Screened Interval:
(Including Sand Pack) —

Condition of Well: Good

Screened Formation: Shallow Bedrock

Top of Casing Elevation: 960.06'

Total Depth: 62.64'
(From Top of Casing)

Screened Interval: 900.06'-905.06'
(Screen Only)

WEATHER CONDITIONS

Weather: Cloudy —

Barometric Pressure: —

Temperature: 15°F

Wind Direction: W

FIELD MEASURED PARAMETERS

Personnel Present: S. Ferguson, D. Becker

Measured Total Depth: 62.64'
(From Top of Casing)

Volume of Static Water: 7.9 gal

Static Water Level: 14.16'
(From Top of Casing)

Ground-Water Elevation: 945.90'

PURGING DATA

Date of Purging: 1/25/00

Time of Purging: 1540

Purging Method: Keck Pump

Volume Purged: 24.6 gal

Purging Rate: ≈ 1 gal/min

	Well Volumes Purged				
	Initial	1	2	3	4
pH	7.50	7.34	7.31	7.31	
Temp.	8.8	9.3	9.6	10.0	
Spec. Cond.					
Corr. Cond.	1258	1230	1234	1235	
Redox. Pot.				-14mV	
D.O.				0.56 mg/L	
Turbidity	0	0	0	0	

Volume-to-Purge Calculation Table				
Well Casing Dia. (in.)	Gallons Per Ft. of Depth	Feet of Standing Water	3 Well Volumes	Gallons to Purge
2	0.163	X 48.48	X 3	= 23.7
4	0.653	X	X 3	=
6	1.469	X	X 3	=

SAMPLING DATA

Date of Sampling: 1/25/00

Time of Sampling: 16:00

Sampling Method: Disp. Sampler

Static Water Level: 25.80' T

(At Time of Sampling)

	Final/Additional Well Volumes			
	1	2	3	4
pH	7.31			
Temp.	10.0			
Spec. Cond.				
Corr. Cond.	1235			
Redox. Pot.	-14mV			
D.O.	0.56 mg/L			
Turbidity	0			

Notes

Sulfur Odor

Percent Gas: 0

Percent LEL: 0

Hall B Associates, Inc.
3401 Glendale Ave.
Suite 300
Toledo, Ohio 43614
Telephone (419) 385-2018
Fax (419) 385-5487

GROUND-WATER MONITOR WELL DATA SHEET

Monitor Well ID: RW04

FACILITY INFORMATION

Name: Albion-Sheridan Twp. Landfill Project No.: ALB025
Address: 29975 East Erie Road, Albion, MI 49224
Contact: Leroy Schmidt Telephone: (517) 629-5535

MONITOR WELL DATA

Coordinates:	—	N	Condition of Well: Could not observe
Casing Material/Diameter:	—		Screened Formation: —
Ground Surface Elevation:	—		Top of Casing Elevation: —
Total Depth: (From Ground Surface)	—		Total Depth: (From Top of Casing)
Screened Interval: (Including Sand Pack)	—		Screened Interval: (Screen Only)

WEATHER CONDITIONS

Weather: Cloudy Temperature: 28°F
Barometric Pressure: — Wind Direction: W

FIELD MEASURED PARAMETERS

Personnel Present: D. Benecke, T. Frederickson

Measured Total Depth: (From Top of Casing)	—	Static Water Level: (From Top of Casing)	—
Volume of Static Water:	—	Ground-Water Elevation:	—

PURGING DATA

Date of Purging:	NA	Time of Purging:	NA
Purging Method:	NA	Volume Purged:	—
Purging Rate:	—		

Well Volumes Purged					
	Initial	1	2	3	4
pH					
Temp.	13.5				
Spec. Cond.					
Corr. Cond.					
Redox. Pot.					
D.O.					
Turbidity	.				

Volume-to-Purge Calculation Table

Well Casing Dia. (in.)	Gallons Per Ft. of Depth	Feet of Standing Water	3 Well Volumes	Gallons to Purge
2	0.163	X	X 3	=
4	0.653	X	X 3	=
6	1.469	X	X 3	=

SAMPLING DATA

Date of Sampling: 2/13/00 Time of Sampling: 1150
Sampling Method: Kitchen Faucet Grab

Final/Additional Well Volumes				
	1	2	3	4
pH	7.45			
Temp.	13.5			
Spec. Cond.				
Corr. Cond.	737			
Redox. Pot.	-24 mV			
D.O.	1.41			
Turbidity	0			

Notes

Let water run from faucet for approximately 5 min. prior to sample collection.

Percent Gas: —

Percent LEL: —

Hull & Associates, Inc.
3401 Glendale Ave.
Suite 300
Toledo, Ohio 43614
Telephone (419) 385-2048
Fax (419) 385-5487

GROUND-WATER MONITOR WELL DATA SHEET

Monitor Well ID: RW06

FACILITY INFORMATION

Name: ALBION-SHERIDAN TWP. LANDFILL Project No.: ALB025
Address: 29975 East Erie Road, Albion, MI 49224
Contact: Leroy Schmidt Telephone: (517) 629-5535

MONITOR WELL DATA

Coordinates: — N Condition of Well: Could not observe
— E
Casing Material/Diameter: —
Ground Surface Elevation: —
Total Depth: —
(From Ground Surface)
Screened Interval:
(Including Sand Pack) —
Screened Formation: —
Top of Casing Elevation: —
Total Depth:
(From Top of Casing) —
Screened Interval:
(Screen Only) —

WEATHER CONDITIONS

Weather: Cloudy Temperature: 28°F
Barometric Pressure: — Wind Direction: W

FIELD MEASURED PARAMETERS

Personnel Present: D. Benecke, T. Frederickson
Measured Total Depth: —
(From Top of Casing)
Volume of Static Water: —
Static Water Level:
(From Top of Casing)
Ground-Water Elevation: —

PURGING DATA

Date of Purging: — Time of Purging: —
Purging Method: NA Volume Purged: —
Purging Rate: —

	Well Volumes Purged				
	Initial	1	2	3	4
pH					
Temp.					
Spec. Cond.					
Corr. Cond.					
Redox. Pot.					
D.O.					
Turbidity					

Volume-to-Purge Calculation Table				
Well Casing Dia. (in.)	Gallons Per Ft. of Depth	Feet of Standing Water	3 Well Volumes	Gallons to Purge
2	0.163	X	X 3	=
4	0.653	X	X 3	=
6	1.469	X	X 3	=

SAMPLING DATA

Date of Sampling: 2/3/00 Time of Sampling: 1055
Sampling Method: Grab sample from spigot Static Water Level: —
(At Time of Sampling)

	Final/Additional Well Volumes			
	1	2	3	4
pH	7.69			
Temp.	58.3			
Spec. Cond.				
Corr. Cond.	865			
Redox. Pot.	-37mV			
D.O.	3.35			
Turbidity	0			

Notes

Let water run from spigot for approximately 5 min. prior to sample.

Percent Gas: —

Percent LEL: —

Hull B. Associates, Inc.
3401 Glendale Ave.
Suite 300
Toledo, Ohio 43614
Telephone (419) 385-2018
Fax (419) 385-5487

GROUND-WATER MONITOR WELL DATA SHEET

Monitor Well ID: RW07

FACILITY INFORMATION

Name: Albion-Sheridan Twp. Landfill Project No.: ALB025
Address: 29975 East Erie Road, Albion, Michigan 49224
Contact: Leroy Schmidt Telephone: (517) 629-5535

MONITOR WELL DATA

Coordinates: — N Condition of Well: No cap - put expandable locking cap on w/ 3476 lock
— E
Casing Material/Diameter: Steel / 4" Screened Formation: —
Ground Surface Elevation: — Top of Casing Elevation: —
Total Depth: — Total Depth: (From Top of Casing)
(From Ground Surface) — Screened Interval:
— (Including Sand Pack) (Screen Only)

WEATHER CONDITIONS

Weather: Cloudy Temperature: 28°F
Barometric Pressure: — Wind Direction: W

FIELD MEASURED PARAMETERS

Personnel Present: D. Benecke, T. Fredericksen
Measured Total Depth: 58.20 Static Water Level: 14.76
(From Top of Casing)
Volume of Static Water: 28.5 gal | 28.3 gal Ground-Water Elevation:

PURGING DATA

Date of Purging: 2/3/00 Time of Purging: 1314
Purging Method: Whale pump Volume Purged: 100 gal
Purging Rate: ≈ 2 gal/min

	Well Volumes Purged				
	initial	1	2	3	4
pH	9.00	7.70	7.60	7.59	7.56
Temp.	8.0	10.2	10.9	10.5	10.3
Spec. Cond.					
Corr. Cond.	225	657	637	663	664
Redox. Pot.					
D.O.					
Turbidity	1	0	0	0	0

Volume-to-Purge Calculation Table				
Well Casing Dia. (in.)	Gallons Per Ft. of Depth	Feet of Standing Water	3 Well Volumes	Gallons to Purge
2	0.163	x 43.44	x 3	= 84.9
4	0.653	x 43.44	x 3	= 258
6	1.469	x	x 3	*

SAMPLING DATA

Date of Sampling: 2/3/00 Time of Sampling: 1555
Sampling Method: Whale pump Static Water Level: 15.1' ft
(At Time of Sampling)

	Final/Additional Well Volumes			
	1	2	3	4
pH	7.56			
Temp.	10.3			
Spec. Cond.				
Corr. Cond.	664			
Redox. Pot.	-30			
D.O.	0.53			
Turbidity	0			

Notes

slightly orange @ initial
1/2 well volume for conc. stability

Percent Gas: 0

Percent LEL: 0

ATTACHMENT A-3

Chain of Custody and Request for Analysis Form
for the January/February 2000 Sampling Event



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

NO. 3496

Dublin

6130 Wilcox Road
Dublin, Ohio 43016
Phone: (614)385-8777
FAX: (814)385-9070

Toledo

3401 Glendale Avenue
SUITE 300
Toledo, Ohio 43614
Phone: (419)385-2018
FAX: (419)385-5489

Mason

4700 Duke Drive, Suite 172
Mason, Ohio 45040
Phone: (513)459-9677
FAX: (513)459-9889

Warrensville Heights

4949 Galaxy Parkway, Suite S
Warrensville Heights, Ohio 44128
Phone: (216)514-7100
FAX: (216)514-7104

REPORT TO: William Petruzzini

Client: O+M Defendants

Site: Albion-Sheridan TWP Landfill

Project#: ALB025 Phase: 99. MNT

Samplers: D.Benecke, S.Ferguson

SAMPLE TYPES	PRESERVATIVES	METALS
A AIR	A - Cool only, <4° C	F - FILTERED
C ASBESTOS	B - HNO ₃ , pH<2	N - NOT FILTERED
D SEDIMENT	C - H ₂ SO ₄ , pH<2	B - BOTH
G GROUNDWATER	D - NaOH pH>12	
P PRODUCT	E - ZnAcetate + NaOH, pH>9	
S SOIL	F - Na ₂ SO ₄ (0.008%)	
W WATER	G - HCl pH<2	
Z OTHERS	All samples are kept at 4°C.	

PROJECT NO.	SAMPLE LOCATION	SAMPLE TYPE	SAMPLER ID	NO. OF CONT.	METALS	SAMPLING DATE/TIME	ANALYSES			COMMENTS
							24Hr	48h	7d	
ALB025 : MW02SB	: 6 012500	:	340	3	F	1/25/00	1	1	1	
ALB025 : MW05SB	: 6 012500 A	:	340	3	F	1/25/00	1	1	1	
ALB025 : MW05SB	: G 012500 B	:	340	3	F	1/25/00	1	1	1	
ALB025 : MW06SB	: G 012500	:	340	3	F	1/25/00	1	1	1	
ALB025 : MW04SB	: G 012500	:	340	3	F	1/25/00	1	1	1	
ALB025 : MW08SB	: G 012500	:	340	3	F	1/25/00	1	1	1	
ALB025 : MW09SB	: G 012500	:	340	3	F	1/25/00 1600	1	1	1	
ALB025 : FBI	: W 012500	:	340	3	F	1/25/00	1	1	1	
:	:	:				/				
:	:	:				/				
:	:	:				/				
:	:	:				/				

RELINQUISHED BY:
David Benecke

DATE: 1-26-00

TIME: 5-00 - pm

RECEIVED BY:

Fed Ex

DATE: 1-26-00

TIME: 5-00 - pm

Deliver To: Test America, Inc.

RELINQUISHED BY:

DATE: - -

TIME: - -

RECEIVED BY:

CK

DATE: 1-27-00

TIME: 10:00 AM

Method of Delivery: Fed Ex

RELINQUISHED BY:

DATE: - -

TIME: - -

RECEIVED FOR LAB BY:

CK / Fed X

DATE: 1-27-00

TIME: 10:00 AM

Airbill Number:

NOTES: Record Temp Blank

COOLER TEMPERATURE
AS RECEIVED °C :

10 °C

DISTRIBUTION:

WHITE -- LAB USE (MUST BE RETURNED WITH REPORT)
YELLOW -- LAB USE
PINK -- RETAINED BY HAN

TURN AROUND TIME:

21

DAYS

Hull and Associates, Inc.
3401 Glendale Ave. Suite 300
Toledo, Ohio 43614
(419) 385-2018
(419) 385-5487 (fax)

REQUEST FOR ANALYSIS

Sheet 1 of 1

Project/Facility: ALBION-SHERIDAN TOWNSHIP LANDFILL

Sample Date: 01/25/00

Address: 29975 EAST ERIE ROAD, ALBION, MICHIGAN, 49224

Contact: LEROY SCHMIDT Telephone: 517-629-5535

Report to: WILLIAM PETRUZZI

Sample ID#: ALB025 : ALB0258 : G012500 : 340

Billing Address/PO #:

Sample Type: GROUND WATER



Grab



Composite

GENERAL

Specific Conductance

Field

Lab

Diss Oxygen

Field

Lab

pH

Field

Lab

Temperature

Field

Lab

eH

Field

Lab

T/S Dry Solids

TVS

TSS

VSS

TDS

Acidity

Alkalinity, Total

Alkalinity, as CaCO₃

Alkalinity, as HCO₃

BOD-5

TOC

Total Hardness

Paint Filter Test

Flash Point

Reactivity (CN, S)

TOX

COD

Chloride

Cyanide

Fluoride

Hydrocarbons-IR

MBAS

N-Ammonia

N-Kjeldahl

N-Organic

N-Nitrate-Nitrite

N-Nitrite

Oil & Grease

Phenols

Phosphorus

Silica

Sulfate

Sulfide

Turbidity

METALS

T*

D*

Aluminum

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Mercury

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Titanium

Vanadium

Zinc

*T - Total Metals

*D - Dissolved Metals

MISC ORGANICS

MTBE

BTEX

TPH

MDNR Scan 1

MDNR Scan 2

MDNR Scan 3

MDNR Scan 4

MDNR Scan 5

MDNR Scan 6

MDNR Scan 7

MDNR Scan 8

VOC'S - TCL
(BENZENE AND VINYL CHLORIDE)

TCLP

TCLP-All

Metals-Michigan (10)

Metals (8)

Volatiles

Semivolatiles

Herbicides/Pesticides

Matrix Spike

ADDITIONAL

1,2-DIBROMO-3-CHLOROPROP.

Ship UPS

Client Pick-up

Site Delivery/Pick-up

Our Sampling

Notes:

pH S.U.= 7.46

Cond. uhmhos= 1108

Temp. °C= 10.0

Diss. O₂ mg/L= 0.59

eH mvolts= -22

Sample Containers Provided By: Test America, Inc.

SAMPLERS: DAB, SDF

Submitted by: David Beneke

Received by: CK/Ted X

Date:

1-27-00 10:00 AM

Hull and Associates, Inc.
3401 Glendale Ave. Suite 300
Toledo, Ohio 43614
(419) 385-2018
(419) 385-5487 (fax)

REQUEST FOR ANALYSIS

Sheet 1 of 1

Project/Facility: ALBION-SHERIDAN TOWNSHIP LANDFILL

Sample Date: 01/25/00

Address: 29975 EAST ERIE ROAD, ALBION, MICHIGAN, 49224

Contact: LEROY SCHMIDT Telephone: 517-629-5535

Report to: WILLIAM PETRUZZI

Sample ID#: ALB025 : MW055B : G012500A : 340

Billing Address/PO #:

Sample Type: GROUND WATER



Grab



Composite

GENERAL

Specific Conductance

Field

Lab

Diss Oxygen

Field

Lab

pH

Field

Lab

Temperature

Field

Lab

eH

Field

Lab

T/S Dry Solids

TVS

TSS

VSS

TDS

Acidity

Alkalinity, Total

Alkalinity, as CaCO₃

Alkalinity, as HCO₃

BOD-5

TOC

Total Hardness

Paint Filter Test

Flash Point

Reactivity (CN, S)

TOX

COD

Chloride

Cyanide

Fluoride

Hydrocarbons-IR

MBAS

N-Ammonia

N-Kjeldahl

N-Organic

N-Nitrate-Nitrite

N-Nitrite

Oil & Grease

Phenols

Phosphorus

Silica

Sulfate

Sulfide

Turbidity

Priority Pollutants-All

Volatile Organics

Base/Neutral Extractables

Acid Extractable (Phenols)

Inorganics (13 Metals + Cyanide)

Pesticides and PCB's

METALS

T*

D*

Aluminum

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Mercury

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Titanium

Vanadium

Zinc

MISC ORGANICS

MTBE

BTEX

TPH

MDNR Scan 1

MDNR Scan 2

MDNR Scan 3

MDNR Scan 4

MDNR Scan 5

MDNR Scan 6

MDNR Scan 7

MDNR Scan 8

VOC'S - TCL
(BENZENE AND VINYL CHLORIDE)

TCLP

TCLP-All

Metals-Michigan (10)

Metals (8)

Volatiles

Semivolatiles

Herbicides/Pesticides

Matrix Spike

ADDITIONAL

1,2-DIBROMO-3-CHLOROPROP/

*T - Total Metals

*D - Dissolved Metals

Ship UPS

Client Pick-up

Site Delivery/Pick-up

Our Sampling

Notes:

pH S.U.= 7.51

Cond. uhmhos= 738

Temp. °C= 9.6

Diss. O₂ mg/L= 0.48

eH mvolts= -27

Sample Containers Provided By: Test America, Inc.

SAMPLERS: DAB, SDF

Submitted by: David Benecke

Received by: CK / Fed X

Date: 1-27-00 10:00am

Hull and Associates, Inc.
3401 Glendale Ave. Suite 300
Toledo, Ohio 43614
(419) 385-2018
(419) 385-5487 (fax)

REQUEST FOR ANALYSIS

Sheet 1 of 1

Project/Facility: ALBION-SHERIDAN TOWNSHIP LANDFILL

Sample Date: 01/25/00

Address: 29975 EAST ERIE ROAD, ALBION, MICHIGAN, 49224

Contact: LEROY SCHMIDT Telephone: 517-629-5535

Report to: WILLIAM PETRUZZI

Sample ID#: ALB025 : M0558 : G012500B : 340

Billing Address/PO #:

Sample Type: GROUND WATER



Grab



Composite

GENERAL

Specific Conductance

Field

Lab

Diss-Oxygen

Field

Lab

pH

Field

Lab

Temperature

Field

Lab

eH

Field

Lab

T/S Dry Solids

TVS

TSS

VSS

TDS

Acidity

Alkalinity, Total

Alkalinity, as CaCO₃

Alkalinity, as HCO₃

BOD-5

TOC

Total Hardness

Paint Filter Test

Flash Point

Reactivity (CN, S)

TOX

COD

Chloride

Cyanide

Fluoride

Hydrocarbons-IR

MBAS

N-Ammonia

N-Kjeldahl

N-Organic

N-Nitrate-Nitrite

N-Nitrite

Oil & Grease

Phenols

Phosphorus

Silica

Sulfate

Sulfide

Turbidity

Priority Pollutants-All

Volatile Organics

Base/Neutral Extractables

Acid Extractable (Phenols)

Inorganics (13 Metals + Cyanide)

Pesticides and PCB's

METALS

T*

D*

Aluminum

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Mercury

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Titanium

Vanadium

Zinc

MISC ORGANICS

MTBE

BTEX

TPH

MDNR Scan 1

MDNR Scan 2

MDNR Scan 3

MDNR Scan 4

MDNR Scan 5

MDNR Scan 6

MDNR Scan 7

MDNR Scan 8

VOC'S - TCL
(BENZENE AND VINYL CHLORIDE)

TCLP

TCLP-All

Metals-Michigan (10)

Metals (8)

Volatiles

Semivolatiles

Herbicides/Pesticides

Matrix Spike

ADDITIONAL

1,2-DIBROMO-3-CHLOROPROPANE

*T - Total Metals

*D - Dissolved Metals

Ship UPS

Client Pick-up

Site Delivery/Pick-up

Our Sampling

Notes:

pH S.U.= 7.51

Cond. uhmhos= 738

Temp. °C= 9.6

Diss. O₂ mg/L= 0.48

eH mvolts= -27

Sample Containers Provided By: Test America, Inc.

SAMPLERS: DAB, SDF

Submitted by: David Bawden

Received by: CK / Tedx

Date: 1-27-00 10:00AM

Hull and Associates, Inc.
3401 Glendale Ave. Suite 300
Toledo, Ohio 43614
(419) 385-2018
(419) 385-5487 (fax)

REQUEST FOR ANALYSIS

Sheet 1 of 1

Project/Facility: ALBION-SHERIDAN TOWNSHIP LANDFILL

Sample Date: 01/25/00

Address: 29975 EAST ERIE ROAD, ALBION, MICHIGAN, 49224

Contact: LEROY SCHMIDT Telephone: 517-629-5535

Report to: WILLIAM PETRUZZI

Sample ID#: ALB025 : MW0658.G 012500:340

Billing Address/PO #:

Sample Type: GROUND WATER

Grab

Composite

GENERAL

Specific Conductance

Field

Lab

Diss Oxygen

Field

Lab

pH

Field

Lab

Temperature

Field

Lab

eH

Field

Lab

T/S Dry Solids

TVS

TSS

VSS

TDS

Acidity

Alkalinity, Total

Alkalinity, as CaCO₃

Alkalinity, as HCO₃

BOD-5

TOC

Total Hardness

Paint Filter Test

Flash Point

Reactivity (CN, S)

TOX

COD

Chloride

Cyanide

Fluoride

Hydrocarbons-IR

MBAS

N-Ammonia

N-Kjeldahl

N-Organic

N-Nitrate-Nitrite

N-Nitrite

Oil & Grease

Phenols

Phosphorus

Silica

Sulfate

Sulfide

Turbidity

Priority Pollutants-All

Volatile Organics

Base/Neutral Extractables

Acid Extractable (Phenols)

Inorganics (13 Metals + Cyanide)

Pesticides and PCB's

METALS

T*

D*

Aluminum

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Mercury

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Titanium

Vanadium

Zinc

MISC ORGANICS

MTBE

BTEX

TPH

MDNR Scan 1

MDNR Scan 2

MDNR Scan 3

MDNR Scan 4

MDNR Scan 5

MDNR Scan 6

MDNR Scan 7

MDNR Scan 8

VOC'S - TCL (BENZENE AND VINYL CHLORIDE)

TCLP

TCLP-All

Metals-Michigan (10)

Metals (8)

Volatiles

Semivolatiles

Herbicides/Pesticides

Matrix Spike

ADDITIONAL

1,2-DIBROMO-3-CHLOROPROPA

Ship UPS

Client Pick-up

Site Delivery/Pick-up

Our Sampling

Notes: pH S.U. = 7.44

Cond. uhmhos = 1146

Temp. °C = 8.5

Diss. O₂ mg/L = 0.71

eH mvolts = -7.6

Sample Containers Provided By: Test America, Inc.

SAMPLERS: DAB, SDF

Submitted by: David Bennett

Received by: CK / Fed X

Date: 1/27/00 10:00 AM

*Please reference on all analytical reports

Hull and Associates, Inc.
3401 Glendale Ave. Suite 300
Toledo, Ohio 43614
(419) 385-2018
(419) 385-5487 (fax)

REQUEST FOR ANALYSIS

Sheet 1 of 1

Project/Facility: ALBION-SHERIDAN TOWNSHIP LANDFILL

Sample Date: 01/25/00

Address: 29975 EAST ERIE ROAD, ALBION, MICHIGAN, 49224

Contact: LEROY SCHMIDT Telephone: 517-629-5535

Report to: WILLIAM PETRUZZI

Sample ID#: ALB025 : MW0458 : G01Z500 : 340

Billing Address/PO #:

Sample Type: GROUND WATER



Grab



Composite

GENERAL

Specific Conductance

Field

Lab

Diss Oxygen

Field

Lab

pH

Field

Lab

Temperature

Field

Lab

eH

Field

Lab

T/S Dry Solids

TVS

TSS

VSS

TDS

Acidity

Alkalinity, Total

Alkalinity, as CaCO₃

Alkalinity, as HCO₃

BOD-5

TOC

Total Hardness

Paint Filter Test

Flash Point

Reactivity (CN, S)

TOX

COD

Chloride

Cyanide

Fluoride

Hydrocarbons-IR

MBAS

N-Ammonia

N-Kjeldahl

N-Organic

N-Nitrate-Nitrite

N-Nitrite

Oil & Grease

Phenols

Phosphorus

Silica

Sulfate

Sulfide

Turbidity

Priority Pollutants-All

Volatile Organics

Base/Neutral Extractables

Acid Extractable (Phenols)

Inorganics (13 Metals + Cyanide)

Pesticides and PCB's

METALS

T*

D*

Aluminum

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Mercury

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Titanium

Vanadium

Zinc

MISC ORGANICS

MTBE

BTEX

TPH

MDNR Scan 1

MDNR Scan 2

MDNR Scan 3

MDNR Scan 4

MDNR Scan 5

MDNR Scan 6

MDNR Scan 7

MDNR Scan 8

VOC'S - TCL
(BENZENE AND VINYL CHLORIDE)

TCLP

TCLP-All

Metals-Michigan (10)

Metals (8)

Volatiles

Semivolatiles

Herbicides/Pesticides

Matrix Spike

ADDITIONAL

1,2-DIBROMO-3-CHLOROPROP/

*T - Total Metals

*D - Dissolved Metals

Ship UPS

Client Pick-up

Site Delivery/Pick-up

Our Sampling

Notes:

pH S.U.= 7.29

Cond. uhmhos= 1383

Temp. °C= 10.5

Diss. O₂ mg/L= 0.80

eH mvolts= -12

Sample Containers Provided By: Test America, Inc.

SAMPLERS: DAB, SDF

Submitted by: David Bender

Received by: CK / Fed X

Date: 1-27/00

10:00 AM

Hull and Associates, Inc.
3401 Glendale Ave. Suite 300
Toledo, Ohio 43614
(419) 385-2018
(419) 385-5487 (fax)

REQUEST FOR ANALYSIS

Sheet 1 of 1

Project/Facility: ALBION-SHERIDAN TOWNSHIP LANDFILL

Sample Date: 01/25/00

Address: 29975 EAST ERIE ROAD, ALBION, MICHIGAN, 49224

Contact: LEROY SCHMIDT Telephone: 517-629-5535

Report to: WILLIAM PETRUZZI

Sample ID#: * ALB025 : MW085B: G012500 : 340

Billing Address/PO #:

Sample Type: GROUND WATER



Grab



Composite

GENERAL

Specific Conductance

Paint Filter Test

Field

Flash Point

Lab

Reactivity (CN, S)

Diss Oxygen

TOX

Field

COD

Lab

Chloride

pH

Cyanide

Field

Fluoride

Lab

Hydrocarbons-IR

Temperature

MBAS

Field

N-Ammonia

Lab

N-Kjeldahl

eH

N-Organic

Field

N-Nitrate-Nitrite

Lab

N-Nitrite

T/S Dry Solids

Oil & Grease

TVS

Phenols

TSS

Phosphorus

VSS

Silica

TDS

Sulfate

Acidity

Sulfide

Alkalinity, Total

Turbidity

Alkalinity, as CaCO₃

Priority Pollutants-All

Alkalinity, as HCO₃

Volatile Organics

BOD-5

Base/Neutral Extractables

TOC

Acid Extractable (Phenols)

Total Hardness

Inorganics (13 Metals + Cyanide)

Pesticides and PCB's

METALS

T*

D*

Aluminum

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Mercury

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Titanium

Vanadium

Zinc

MISC ORGANICS

MTBE

BTEX

TPH

MDNR Scan 1

MDNR Scan 2

MDNR Scan 3

MDNR Scan 4

MDNR Scan 5

MDNR Scan 6

MDNR Scan 7

MDNR Scan 8

VOC'S - TCL
(BENZENE AND VINYL CHLORIDE)

TCLP

TCLP-All

Metals-Michigan (10)

Metals (8)

Volatiles

Semivolatiles

Herbicides/Pesticides

Matrix Spike

ADDITIONAL

1,2-DIBROMO-3-CHLOROPROP/

Ship UPS

Client Pick-up

Site Delivery/Pick-up

Our Sampling

Notes: pH S.U. = 7.38

Cond. uhmhos = 960

Temp. °C = 9.4

Diss. O₂ mg/L = 0.12

eH mvolts = -17

*T - Total Metals

*D - Dissolved Metals

Sample Containers Provided By: Test America, Inc.

SAMPLERS: DAB, SDF

Submitted by: David Benecke

Received by: CK/Ted Y

Date: 1-27-00 10:00AM

*Please reference on all analytical reports

Hull and Associates, Inc.
3401 Glendale Ave, Suite 300
Toledo, Ohio 43614
(419) 385-2018
(419) 385-5487 (fax)

REQUEST FOR ANALYSIS

Sheet 1 of 1

Project/Facility: ALBION-SHERIDAN TOWNSHIP, LANDFILL

Sample Date: 01/25/00

Address: 29975 EAST ERIE ROAD, ALBION, MICHIGAN, 49224

Contact: LEROY SCHMIDT Telephone: 517-629-5535

Report to: WILLIAM PETRUZZI

Sample ID#: ALB025 : MW095B : G012500 : 340

Billing Address/PO #:

Sample Type: GROUND WATER

Grab

Composite

GENERAL

Specific Conductance

Field

Lab

Diss Oxygen

Field

Lab

pH

Field

Lab

Temperature

Field

Lab

eH

Field

Lab

T/S Dry Solids

TVS

TSS

VSS

TDS

Acidity

Alkalinity, Total

Alkalinity, as CaCO₃

Alkalinity, as HCO₃

BOD-5

TOC

Total Hardness

Paint Filter Test

Flash Point

Reactivity (CN, S)

TOX

COD

Chloride

Cyanide

Fluoride

Hydrocarbons-IR

MBAS

N-Ammonia

N-Kjeldahl

N-Organic

N-Nitrate-Nitrite

N-Nitrite

Oil & Grease

Phenols

Phosphorus

Silica

Sulfate

Sulfide

Turbidity

Priority Pollutants-All

Volatile Organics

Base/Neutral Extractables

Acid Extractable (Phenols)

Inorganics (13 Metals + Cyanide)

Pesticides and PCB's

METALS

T* D*

Aluminum

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Mercury

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Titanium

Vanadium

Zinc

MISC ORGANICS

MTBE

BTEX

TPH

MDNR Scan 1

MDNR Scan 2

MDNR Scan 3

MDNR Scan 4

MDNR Scan 5

MDNR Scan 6

MDNR Scan 7

MDNR Scan 8

VOC'S - TCL
(BENZENE AND VINYL CHLORIDE)

TCLP

TCLP-All

Metals-Michigan (10)

Metals (8)

Volatiles

Semivolatiles

Herbicides/Pesticides

Matrix Spike

ADDITIONAL

1,2-DIBROMO-3-CHLOROPROPANE

Ship UPS

Client Pick-up

Site Delivery/Pick-up

Our Sampling

Notes: pH S.U.= 7.31

Cond. uhmhos= 1235

Temp. °C= 10.0

Diss. O₂ mg/L= 0.56

eH mvolts= -14

Sample Containers Provided By: Test America, Inc.

SAMPLERS: DAB, SDF

Submitted by: David Bennett

Received by: K/Ted X

Date: 1/29/00

10,000m

*Please reference on all analytical reports

Hull and Associates, Inc.
3401 Glendale Ave. Suite 300
Toledo, Ohio 43614
(419) 385-2018
(419) 385-5487 (fax)

REQUEST FOR ANALYSIS

Sheet 1 of 1

Project/Facility: ALBION-SHERIDAN TOWNSHIP LANDFILL

Sample Date: 01/25/00

Address: 29975 EAST ERIE ROAD, ALBION, MICHIGAN, 49224

Contact: LEROY SCHMIDT Telephone: 517-629-5535

Report to: WILLIAM PETRUZZI

Sample ID#: ALB025 FB 1 W012500 : 340

Billing Address/PO #:

Sample Type: LAB WATER

Grab

Composite

GENERAL

Specific Conductance

Field

Lab

Diss Oxygen

Field

Lab

pH

Field

Lab

Temperature

Field

Lab

eH

Field

Lab

T/S Dry Solids

TVS

TSS

VSS

TDS

Acidity

Alkalinity, Total

Alkalinity, as CaCO₃

Alkalinity, as HCO₃

BOD-5

TOC

Total Hardness

Paint Filter Test

Flash Point

Reactivity (CN, S)

TOX

COD

Chloride

Cyanide

Fluoride

Hydrocarbons-IR

MBAS

N-Ammonia

N-Kjeldahl

N-Organic

N-Nitrate-Nitrite

N-Nitrite

Oil & Grease

Phenols

Phosphorus

Silica

Sulfate

Sulfide

Turbidity

Priority Pollutants-All

Volatile Organics

Base/Neutral Extractables

Acid Extractable (Phenols)

Inorganics (13 Metals + Cyanide)

Pesticides and PCB's

METALS

T* D* *AS*

X *AS* Aluminum

X *AS* Antimony

X Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

X *AS* Cobalt

Copper

Iron

Lead

Magnesium

X *AS* Manganese

Mercury

Molybdenum

X *AS* Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Titanium

Vanadium

Zinc

*T - Total Metals

*D - Dissolved Metals

MISC ORGANICS

MTBE

BTEX

TPH

MDNR Scan 1

MDNR Scan 2

MDNR Scan 3

MDNR Scan 4

MDNR Scan 5

MDNR Scan 6

MDNR Scan 7

MDNR Scan 8

VOC's - TCL

(BENZENE AND VINYL CHLORIDE)

TCLP

TCLP-All

Metals-Michigan (10)

Metals (8)

Volatiles

Semivolatiles

Herbicides/Pesticides

Matrix Spike

ADDITIONAL

1,2-DIBROMO-3-CHLOROPRC

Ship UPS

Client Pick-up

Site Delivery/Pick-up

Our Sampling

Notes:

Sample Containers Provided By: Test America, Inc.

SAMPLERS: DAB, SDF

Submitted by: *David Benbow*

Received by: *C K / Ted X*

Date: *1-27-00*

10:00

NO. 3540

CHAIN OF CUSTODY RECORD

Dublin
6130 Wilcox Road
Dublin, Ohio 43016
Phone: (614)385-8777
FAX: (614)385-9070

Toledo
3401 Glendale Avenue
SUITE 300
Toledo, Ohio 43614
Phone: (419)385-2018
FAX: (419)385-5489

Mason
4700 Duke Drive, Suite 172
Mason, Ohio 45040
Phone: (513)459-9877
FAX: (513)459-9869

Warrensville Heights
4949 Galaxy Parkway, Suite S
Warrensville Heights, Ohio 44128
Phone: (216)514-7100
FAX: (216)514-7104

REPORT TO: William PetruzzelClient: OTM DefendantsSite: Albion - Sheridan Twp. LandfillProject#: ALB025 Phase: 00. MNTSamplers: D. Benenke, T. Frederickson

SAMPLE TYPES	PRESERVATIVES	METALS
A AIR	A - Cool only, <4° C	F - FILTERED
C ASBESTOS	B - HNO ₃ pH<2	H - NOT FILTERED
D SEDIMENT	C - H ₂ SO ₄ pH<2	B - BOTH
G GROUNDWATER	D - NaOH pH>12	
P PRODUCT	E - Zincate + NaOH, pH>9	
S SOIL	F - Na ₂ S ₂ O ₃ (0.008%)	
W WATER	G - HCl pH <2	
Z OTHERS		

All samples are kept at 4°C.

PROJECT NO.	SAMPLE LOCATION	SAMPLE TYPE	SAMPLER ID	NO. OF CONT.	METALS	SAMPLING DATE/TIME	ANALYSES		COMMENTS
							PRESERVATIVES	METALS	
ALB025 : RW04	: G-002	:	340	6		2/3/00 1150	425	3	JOC-4260
ALB025 : RW06	: G-002	,	340	6		2/3/00 1055	3	3	JOC-5041
ALB025 : RW07	: G-001 A	:	340	6		2/3/00 1535	3	3	
ALB025 : RW07	: G-001 B	:	340	6		2/3/00 1535	3	3	
ALB025 : RW07	: G-001 MS	:	340	6		2/3/00 1535	3	3	
ALB025 : RW07	: G-001 MSD	:	340	6		2/3/00 1535	3	3	
ALB025 : FBZ	: W002	:	340	6		2/3/00 1500	3	3	
ALB025 : TB1	: W002	:	340	6		2/3/00 lab	3	3	
:	:	:				/			
:	:	:				/			
:	:	:				/			
:	:	:				/			

RELINQUISHED BY: <i>David Benenke</i>	DATE: 2-3-00 TIME: 7-30-pm	RECEIVED BY: <i>Fed Ex</i>	DATE: 2-3-00 TIME: 7-30-pm
RELINQUISHED BY: :	DATE: -- -- TIME: -- --	RECEIVED BY:	DATE: -- -- TIME: -- --
RELINQUISHED BY: :	DATE: -- -- TIME: -- --	RECEIVED FOR LAB BY: <i>Celeste Keens</i>	DATE: 2-4-00 TIME: 10:00 AM
COOLER TEMPERATURE AS RECEIVED °C : 20°C	°C	DISTRIBUTION: WHITE -- LAB USE (MUST BE RETURNED WITH REPORT) YELLOW -- LAB USE PINK -- RETAINED BY HN	FedX

Deliver To: Test America, Inc.Method of Delivery: Fed Ex

Airbill Number: _____

NOTES: Record temp b/tan KTURN AROUND TIME: 21 DAYS



CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

NO. 3539

Dublin Toledo Mason

6130 Wilcox Road
Dublin, Ohio 43016
Phone: (614)385-8777
FAX: (614)385-9070

3401 Glendale Avenue
SUITE 300
Toledo, Ohio 43614
Phone: (419)385-2018
FAX: (419)385-5489

4700 Duke Drive, Suite 172
Mason, Ohio 45040
Phone: (513)459-8677
FAX: (513)459-9869

Warrensville Heights

4949 Galaxy Parkway, Suite S
Warrensville Heights, Ohio 44128
Phone: (216)514-7100
FAX: (216)514-7104

REPORT TO: William Petrucci

Client: O&M Defendants

Site: Albion-Sheridan Twp. Landfill

Project#: ALB025 Phase: 00. MNT

Samplers: D.Benecke, T.Fredericksen

SAMPLE TYPES	PRESERVATIVES	METALS
A AIR	A - Cool only, <4° C	F - FILTERED
C ASBESTOS	B - HNO ₃ pH<2	H - NOT FILTERED
D SEDIMENT	C - H ₂ SO ₄ pH<2	B - BOTH
G GROUNDWATER	D - NaOH pH>12	
P PRODUCT	E - Zinc Acetate + NaOH, pH>9	
S SOIL	F - Na ₂ -S ₂ O ₃ (0.008%)	
W WATER	G - HCl pH <2	
Z OTHERS	All samples are kept at 4°C.	

PROJECT NO.	SAMPLE LOCATION	SAMPLE TYPE	SAMPLER ID	NO. OF CONT.	METALS	SAMPLING DATE/TIME	ANALYSES			COMMENTS
							PRESERVATIVES	METALS	ANALYSES	
ALB025 : RW04	: G002	: 340	3	F	2/3/00	1150				
ALB025 : RW06	: G002	: 340	3	F	2/3/00	1055				
ALB025 : RW07	: G 001 A	: 340	3	F	2/3/00	1535				
ALB025 : RW07	: G 001 B	: 340	3	F	2/3/00	1535				
ALB025 : RW07	: G 001 MS	: 340	3	F	2/3/00	1535				
ALB025 : RW07	: G 001 MSD	: 340	3	F	2/3/00	1535				
ALB025 : FBZ	: G002	: 340	3	F	2/3/00	1500				
:	:	:								
:	:	:								
:	:	:								
:	:	:								
:	:	:								

RELINQUISHED BY: <i>David Benecke</i>	DATE: 2-3-00 TIME: 7-30-pm	RECEIVED BY: <i>Fed Ex</i>	DATE: 2-3-00 TIME: 7-30-pm
RELINQUISHED BY:	DATE: - -	RECEIVED BY:	DATE: - -
RELINQUISHED BY:	DATE: - -	RECEIVED FOR LAB BY: <i>Celeste Kenna</i>	DATE: 2-4-00 TIME: 10:00
COOLER TEMPERATURE AS RECEIVED °C :	20°C	DISTRIBUTION:	
		WHITE --LAB USE (MUST BE RETURNED WITH REPORT)	
		YELLOW --LAB USE	
		PINK --RETAINED BY HAI	

Deliver To: Test America, Inc.
 Method of Delivery: Fed Ex
 Airbill Number: _____

NOTES: Record temp. blank

TURN AROUND TIME:

21 DAYS

REQUEST FOR ANALYSIS

Sheet 1 of 1

Project/Facility: ALBION-SHERIDAN TOWNSHIP LANDFILL

Sample Date: 2/3/00

Address: 29975 EAST ERIE ROAD, ALBION, MICHIGAN, 49224

Contact: LEROY SCHMIDT Telephone: 517-629-5535

Report to: WILLIAM PETRUZZI

Sample ID#: ALB025 : R2504 : G 002 : 340

Billing Address/PO #:

Sample Type: DRINKING WATER

Grab

Composite

GENERAL

Specific Conductance

Field

Lab

Diss Oxygen

Field

Lab

pH

Field

Lab

Temperature

Field

Lab

eH

Field

Lab

T/S Dry Solids

TVS

TSS

VSS

TDS

Acidity

Alkalinity, Total

Alkalinity, as CaCO₃

Alkalinity, as HCO₃

BOD-5

TOC

Total Hardness

Paint Filter Test

Flash Point

Reactivity (CN, S)

TOX

COD

Chloride

Cyanide

Fluoride

Hydrocarbons-IR

MBAS

N-Ammonia

N-Kjeldahl

N-Organic

N-Nitrate-Nitrite

N-Nitrite

Oil & Grease

Phenols

Phosphorus

Silica

Sulfate

Sulfide

Turbidity

Priority Pollutants-All

Volatile Organics

Base/Neutral Extractables

Acid Extractable (Phenols)

Inorganics (13 Metals + Cyanide)

Pesticides and PCB's

METALS

T*

D*

Aluminum

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Mercury

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Titanium

Vanadium

Zinc

*T - Total Metals

*D - Dissolved Metals

MTBE

BTEX

TPH

MDNR Scan 1

MDNR Scan 2

MDNR Scan 3

MDNR Scan 4

MDNR Scan 5

MDNR Scan 6

MDNR Scan 7

MDNR Scan 8

VOC'S - TCL
(BENZENE AND VINYL CHLORIDE)

TCLP

TCLP-All

Metals-Michigan (10)

Metals (8)

Volatiles

Semivolatiles

Herbicides/Pesticides

Matrix Spike

ADDITIONAL

1,2-DIBROMO-3-CHLOROPROPANE

Ship UPS

Client Pick-up

Site Delivery/Pick-up

Our Sampling

Notes:

pH S.U.= 7.45

Cond. uhmhos= 737

Temp. °C= 13.5

Diss. O₂ mg/L= 1.41

eH mvolts= -74

Sample Containers Provided By: Test America, Inc.

SAMPLERS: DAB, SDF, TF



Hull and Associates, Inc.
3401 Glendale Ave. Suite 300
Toledo, Ohio 43614
(419) 385-2018
(419) 385-5487 (fax)

REQUEST FOR ANALYSIS

Sheet 1 of 1

Project/Facility: ALBION-SHERIDAN TOWNSHIP LANDFILL

Sample Date: 2/5/00

Address: 29975 EAST ERIE ROAD, ALBION, MICHIGAN, 49224

Contact: LEROY SCHMIDT Telephone: 517-629-5535

Report to: WILLIAM PETRUZZI

Sample ID#: ALB025 : RWD6 : G 00Z : 340

Billing Address/PO #:

Sample Type: DRINKING WATER

Grab

Composite

GENERAL

Specific Conductance

Field

Lab

Diss Oxygen

Field

Lab

pH

Field

Lab

Temperature

Field

Lab

eH

Field

Lab

T/S Dry Solids

TVS

TSS

VSS

TDS

Acidity

Alkalinity, Total

Alkalinity, as CaCO₃

Alkalinity, as HCO₃

BOD-5

TOC

Total Hardness

Paint Filter Test

Flash Point

Reactivity (CN, S)

TOX

COD

Chloride

Cyanide

Fluoride

Hydrocarbons-IR

MBAS

N-Ammonia

N-Kjeldahl

N-Organic

N-Nitrate-Nitrite

N-Nitrite

Oil & Grease

Phenols

Phosphorus

Silica

Sulfate

Sulfide

Turbidity

Priority Pollutants-All

Volatile Organics

Base/Neutral Extractables

Acid Extractable (Phenols)

Inorganics (13 Metals + Cyanide)

Pesticides and PCB's

METALS

T*

D*

Aluminum

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Mercury

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Titanium

Vanadium

Zinc

MISC ORGANICS

MTBE

BTEX

TPH

MDNR Scan 1

MDNR Scan 2

MDNR Scan 3

MDNR Scan 4

MDNR Scan 5

MDNR Scan 6

MDNR Scan 7

MDNR Scan 8

VOC'S - TCL
(BENZENE AND VINYL CHLORIDE)

TCLP

TCLP-All

Metals-Michigan (10)

Metals (8)

Volatiles

Semivolatiles

Herbicides/Pesticides

Matrix Spike

ADDITIONAL

1,2-DIBROMO-3-CHLOROPROPANE

*T - Total Metals

*D - Dissolved Metals

Ship UPS

Client Pick-up

Site Delivery/Pick-up

Our Sampling

Notes:

pH S.U.= 7.69

Cond. uhmhos= 865

Temp. °C= 8.3

Diss. O₂ mg/L= 3.38

eH mvolts= -37

Sample Containers Provided By: Test America, Inc.

SAMPLERS: DAB, SDF, TF

Submitted by: David Bensda

Received by: Celeste Keena

Date: 2-4-00



Hull and Associates, Inc.
3401 Glendale Ave. Suite 300
Toledo, Ohio 43614
(419) 385-2018
(419) 385-5487 (fax)

REQUEST FOR ANALYSIS

Sheet 1 of 1

Project/Facility: ALBION-SHERIDAN TOWNSHIP LANDFILL

Sample Date: 2/13/00

Address: 29975 EAST ERIE ROAD, ALBION, MICHIGAN, 49224

Contact: LEROY SCHMIDT Telephone: 517-629-5535

Report to: WILLIAM PETRUZZI

Sample ID#: ALB025 : RWS07 : G001 A : 340

Billing Address/P.O. #:

Sample Type: DRINKING WATER

Grab

Composite

GENERAL

Specific Conductance

Field

Lab

Diss Oxygen

Field

Lab

pH

Field

Lab

Temperature

Field

Lab

eH

Field

Lab

T/S Dry Solids

TVS

TSS

VSS

TDS

Acidity

Alkalinity, Total

Alkalinity, as CaCO₃

Alkalinity, as HCO₃

BOD-5

TOC

Total Hardness

Paint Filter Test

Flash Point

Reactivity (CN, S)

TOX

COD

Chloride

Cyanide

Fluoride

Hydrocarbons-IR

MBAS

N-Ammonia

N-Kjeldahl

N-Organic

N-Nitrate-Nitrite

N-Nitrite

Oil & Grease

Phenols

Phosphorus

Silica

Sulfate

Sulfide

Turbidity

METALS

T*

D*

Aluminum

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Mercury

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Titanium

Vanadium

Zinc

MISC ORGANICS

MTBE

BTEX

TPH

MDNR Scan 1

MDNR Scan 2

MDNR Scan 3

MDNR Scan 4

MDNR Scan 5

MDNR Scan 6

MDNR Scan 7

MDNR Scan 8

VOC'S - TCL
(BENZENE AND VINYL CHLORIDE)

TCLP

TCLP-All

Metals-Michigan (10)

Metals (8)

Volatiles

Semivolatiles

Herbicides/Pesticides

Matrix Spike

ADDITIONAL

1,2-DIBROMO-3-CHLOROPROPANE

*T - Total Metals

*D - Dissolved Metals

Ship UPS

Client Pick-up

Site Delivery/Pick-up

Our Sampling

Notes: pH S.U. = 7.56

Cond. uhmhos = 664

Temp. °C = 10.3

Diss. O₂ mg/L = 0.53

eH mV = -30

Sample Containers Provided By: Test America, Inc.

SAMPLERS: DAB, SDF, TF

Submitted by: David Bender

Received by: Celeste Keene Date: 2-4-00

*Please reference on all analytical reports

00406

Hull and Associates, Inc.
3401 Glendale Ave. Suite 300
Toledo, Ohio 43614
(419) 385-2018
(419) 385-5487 (fax)

REQUEST FOR ANALYSIS

Sheet 1 of 1

Project/Facility: ALBION-SHERIDAN TOWNSHIP LANDFILL

Sample Date: 2/3/00

Address: 29975 EAST ERIE ROAD, ALBION, MICHIGAN, 49224

Contact: LEROY SCHMIDT Telephone: 517-629-5535

Report to: WILLIAM PETRUZZI

Sample ID#: ALB025 : Rwo 7 : Goo 1 B : 340

Billing Address/PO #:

Sample Type: DRINKING WATER

Grab

Composite

GENERAL

Specific Conductance

Field

Lab

Diss Oxygen

Field

Lab

pH

Field

Lab

Temperature

Field

Lab

eH

Field

Lab

T/S Dry Solids

TVS

TSS

VSS

TDS

Acidity

Alkalinity, Total

Alkalinity, as CaCO₃

Alkalinity, as HCO₃

BOD-5

TOC

Total Hardness

Paint Filter Test

Flash Point

Reactivity (CN, S)

TOX

COD

Chloride

Cyanide

Fluoride

Hydrocarbons-IR

MBAS

N-Ammonia

N-Kjeldahl

N-Organic

N-Nitrate-Nitrite

N-Nitrite

Oil & Grease

Phenols

Phosphorus

Silica

Sulfate

Sulfide

Turbidity

Priority Pollutants-All

Volatile Organics

Base/Neutral Extractables

Acid Extractable (Phenols)

Inorganics (13 Metals + Cyanide)

Pesticides and PCB's

METALS

T*

D*

Aluminum

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Mercury

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Titanium

Vanadium

Zinc

MTBE

BTEX

TPH

MDNR Scan 1

MDNR Scan 2

MDNR Scan 3

MDNR Scan 4

MDNR Scan 5

MDNR Scan 6

MDNR Scan 7

MDNR Scan 8

VOC'S - TCL
(BENZENE AND VINYL CHLORIDE)

TCLP

TCLP-All

Metals-Michigan (10)

Metals (8)

Volatiles

Semivolatiles

Herbicides/Pesticides

Matrix Spike

ADDITIONAL

1,2-DIBROMO-3-CHLOROPROPANE

*T - Total Metals

*D - Dissolved Metals

Ship UPS

Client Pick-up

Site Delivery/Pick-up

Our Sampling

Notes: pH S.U.=

Cond. uhmms=

Temp. °C=

Diss. O₂ mg/L=

eH mvolts=

Sample Containers Provided By: Test America, Inc.

SAMPLERS: DAB, SDF, TF



Hull and Associates, Inc.
3401 Glendale Ave. Suite 300
Toledo, Ohio 43614
(419) 385-2018
(419) 385-5487 (fax)

REQUEST FOR ANALYSIS

Sheet 1 of 1

Project/Facility: ALBION-SHERIDAN TOWNSHIP LANDFILL

Sample Date: 2/13/00

Address: 29975 EAST ERIE ROAD, ALBION, MICHIGAN, 49224

Contact: LEROY SCHMIDT Telephone: 517-629-5535

Report to: WILLIAM PETRUZZI

Sample ID#: ALB025 : ZW07 : G001MS : 340

Billing Address/P.O. #:

Sample Type: DRINKING WATER

Grab

Composite

GENERAL

Specific Conductance

Field

Lab

Diss Oxygen

Field

Lab

pH

Field

Lab

Temperature

Field

Lab

eH

Field

Lab

T/S Dry Solids

TVS

TSS

VSS

TDS

Acidity

Alkalinity, Total

Alkalinity, as CaCO₃

Alkalinity, as HCO₃

BOD-5

TOC

Total Hardness

Paint Filter Test

Flash Point

Reactivity (CN, S)

TOX

COD

Chloride

Cyanide

Fluoride

Hydrocarbons-IR

MBAS

N-Ammonia

N-Kjeldahl

N-Organic

N-Nitrate-Nitrite

N-Nitrite

Oil & Grease

Phenols

Phosphorus

Silica

Sulfate

Sulfide

Turbidity

Priority Pollutants-All

Volatile Organics

Base/Neutral Extractables

Acid Extractable (Phenols)

Inorganics (13 Metals + Cyanide)

Pesticides and PCB's

METALS

T*

D*

Aluminum

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Mercury

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Titanium

Vanadium

Zinc

MISC ORGANICS

MTBE

BTEX

TPH

MDNR Scan 1

MDNR Scan 2

MDNR Scan 3

MDNR Scan 4

MDNR Scan 5

MDNR Scan 6

MDNR Scan 7

MDNR Scan 8

VOC'S - TCL
(BENZENE AND VINYL CHLORIDE)

TCLP

TCLP-All

Metals-Michigan (10)

Metals (8)

Volatiles

Semivolatiles

Herbicides/Pesticides

Matrix Spike

ADDITIONAL

1,2-DIBROMO-3-CHLOROPROPANE

*T - Total Metals

*D - Dissolved Metals

Ship UPS

Client Pick-up

Site Delivery/Pick-up

Our Sampling

Notes: pH S.U. =

Cond. uhmhos =

Temp. °C =

Diss. O₂ mg/L =

eH mvolts =

Sample Containers Provided By: Test America, Inc.

SAMPLERS: DAB, SDF, TF

Submitted by: David Bensber Received by: Celeste Kersa Date: 2-4-00



Hull and Associates, Inc.
3401 Glendale Ave. Suite 300
Toledo, Ohio 43614
(419) 385-2018
(419) 385-5487 (fax)

REQUEST FOR ANALYSIS

Sheet 1 of 1

Project/Facility: ALBION-SHERIDAN TOWNSHIP LANDFILL

Sample Date: 2/13/00

Address: 29975 EAST ERIE ROAD, ALBION, MICHIGAN, 49224

Contact: LEROY SCHMIDT Telephone: 517-629-5535

Report to: WILLIAM PETRUZZI

Sample ID#: ALB025 : 2/20/00 : Goo1m9d: 340

Billing Address/P.O. #:

Sample Type: DRINKING WATER

Grab

Composite

GENERAL

Specific Conductance

Field

Lab

Diss Oxygen

Field

Lab

pH

Field

Lab

Temperature

Field

Lab

eH

Field

Lab

T/S Dry Solids

TVS

TSS

VSS

TDS

Acidity

Alkalinity, Total

Alkalinity, as CaCO₃

Alkalinity, as HCO₃

BOD-5

TOC

Total Hardness

Paint Filter Test

Flash Point

Reactivity (CN, S)

TOX

COD

Chloride

Cyanide

Fluoride

Hydrocarbons-IR

MBAS

N-Ammonia

N-Kjeldahl

N-Organic

N-Nitrate-Nitrite

N-Nitrite

Oil & Grease

Phenols

Phosphorus

Silica

Sulfate

Sulfide

Turbidity

Priority Pollutants-All

Volatile Organics

Base/Neutral Extractables

Acid Extractable (Phenols)

Inorganics (13 Metals + Cyanide)

Pesticides and PCB's

METALS

T*

D*

Aluminum

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Mercury

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Titanium

Vanadium

Zinc

MISC ORGANICS

MTBE

BTEX

TPH

MDNR Scan 1

MDNR Scan 2

MDNR Scan 3

MDNR Scan 4

MDNR Scan 5

MDNR Scan 6

MDNR Scan 7

MDNR Scan 8

VOC'S - TCL
(BENZENE AND VINYL CHLORIDE)

TCLP

TCLP-All

Metals-Michigan (10)

Metals (8)

Volatiles

Semivolatiles

Herbicides/Pesticides

Matrix Spike

ADDITIONAL

1,2-DIBROMO-3-CHLOROPROPANE

*T - Total Metals

*D - Dissolved Metals

Ship UPS

Client Pick-up

Site Delivery/Pick-up

Our Sampling

Notes: pH S.U.=

Cond. uhmhos=

Temp. °C=

Diss. O₂ mg/L=

eH mVols=

Sample Containers Provided By: Test America, Inc.

SAMPLERS: DAB, SDF, TR

Submitted by: *David Schmid* Received by: *Celeste Kelso* Date: 2-4-00

Hull and Associates, Inc.
3401 Glendale Ave. Suite 300
Toledo, Ohio 43614
(419) 385-2018
(419) 385-5487 (fax)

REQUEST FOR ANALYSIS

Sheet 1 of 1

z/3/00

Sample Date: 04/25/00

Project/Facility: ALBION-SHERIDAN TOWNSHIP LANDFILL

Address: 29975 EAST ERIE ROAD, ALBION, MICHIGAN, 49224

Contact: LEROY SCHMIDT Telephone: 517-629-5535

Report to: WILLIAM PETRUZZI

Sample ID#: ALB025 : FB Z : W 00Z : 340

Billing Address/PO #:

Sample Type: LAB WATER

Grab

Composite

GENERAL

Specific Conductance

Field

Lab

Diss Oxygen

Field

Lab

pH

Field

Lab

Temperature

Field

Lab

eH

Field

Lab

T/S Dry Solids

TVS

TSS

VSS

TDS

Acidity

Alkalinity, Total

Alkalinity, as CaCO₃

Alkalinity, as HCO₃

BOD-5

TOC

Total Hardness

Paint Filter Test

Flash Point

Reactivity (CN, S)

TOX

COD

Chloride

Cyanide

Fluoride

Hydrocarbons-IR

MBAS

N-Ammonia

N-Kjeldahl

N-Organic

N-Nitrate-Nitrite

N-Nitrite

Oil & Grease

Phenols

Phosphorus

Silica

Sulfate

Sulfide

Turbidity

METALS

Aluminum

Antimony

Arsenic

Barium

Beryllium

Cadmium

Calcium

Chromium

Cobalt

Copper

Iron

Lead

Magnesium

Manganese

Mercury

Molybdenum

Nickel

Potassium

Selenium

Silver

Sodium

Thallium

Tin

Titanium

Vanadium

Zinc

*T - Total Metals

*D - Dissolved Metals

MISC ORGANICS

MTBE

BTEX

TPH

MDNR Scan 1

MDNR Scan 2

MDNR Scan 3

MDNR Scan 4

MDNR Scan 5

MDNR Scan 6

MDNR Scan 7

MDNR Scan 8

VOC'S - TCL
(BENZENE AND VINYL CHLORIDE)

TCLP

TCLP-All

Metals-Michigan (10)

Metals (8)

Volatiles

Semivolatiles

Herbicides/Pesticides

Matrix Spike

ADDITIONAL

1,2-DIBROMO-3-CHLOROPROPA

Ship UPS

Client Pick-up

Site Delivery/Pick-up

Our Sampling

Notes:

Sample Containers Provided By: Test America, Inc.

SAMPLERS: DAB, SDF, TF

*Please reference on all analytical reports

Submitted by: David Bender Received by: Celeste Kelna Date: 2-4-00

00410

ATTACHMENT B

Laboratory Analytical Data Summary Tables

ATTACHMENT B-1:

Laboratory Analytical Data Summary Tables
For the Monitor Wells Screened in the
Shallow Bedrock Unit

ATTACHMENT B-2:

Laboratory Analytical Data Summary Tables
For Residential Wells

ATTACHMENT B-1

Laboratory Analytical Data Summary Tables for the
Monitor Wells Screened in the Shallow Bedrock Unit

ALBION-SHERIDAN TOWNSHIP LANDFILL
OPERATION AND MAINTENANCE MONITORING

TABLE 1

MONITOR WELL MW-02SB

PARAMETER	UNITS	10/27/99	01/25/00
QUARTERLY PARAMETERS			
NITROGEN, AMMONIA	mg/L	<0.05	<0.05
ARSENIC, DISSOLVED	mg/L	<0.005	<0.005
ANNUAL PARAMETERS			
ALUMINUM, DISSOLVED	mg/L	-	-
ANTIMONY, DISSOLVED	mg/L	-	-
COBALT, DISSOLVED	mg/L	-	-
MANGANESE, DISSOLVED	mg/L	-	-
NICKEL, DISSOLVED	mg/L	-	-
BENZENE	ug/L	-	-
VINYL CHLORIDE	ug/L	-	-
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	-	-
FIVE YEAR PARAMETERS			
BNAs	ug/L	-	-
PESTICIDES	ug/L	-	-
PCBs	ug/L	-	-
CYANIDE	mg/L	-	-
FIELD PARAMETERS			
pH	S.U.	7.41	7.46
CONDUCTIVITY	umhos/cm	1083	1108
TEMPERATURE	°C	10.8	10
eH	millivts	-18	-22
DISSOLVED OXYGEN	mg/L	0	0.59
SUPPLEMENTAL PARAMETERS			
TOTAL DISSOLVED SOLIDS	mg/L	578	619

(-) Not Tested

ALBION-SHERIDAN TOWNSHIP LANDFILL
OPERATION AND MAINTENANCE MONITORING

TABLE 2

MONITOR WELL MW-04SB

PARAMETER	UNITS	10/28/99	01/25/00
<u>QUARTERLY PARAMETERS</u>			
NITROGEN, AMMONIA	mg/L	29	26.7
ARSENIC, DISSOLVED	mg/L	0.023	0.03
<u>ANNUAL PARAMETERS</u>			
ALUMINUM, DISSOLVED	mg/L	-	-
ANTIMONY, DISSOLVED	mg/L	-	-
COBALT, DISSOLVED	mg/L	-	-
MANGANESE, DISSOLVED	mg/L	-	-
NICKEL, DISSOLVED	mg/L	-	-
BENZENE	ug/L	-	-
VINYL CHLORIDE	ug/L	-	-
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	-	-
<u>FIVE YEAR PARAMETERS</u>			
BNAS	ug/L	-	-
PESTICIDES	ug/L	-	-
PCBs	ug/L	-	-
CYANIDE	mg/L	-	-
<u>FIELD PARAMETERS</u>			
pH	S.U.	7.14	7.29
CONDUCTIVITY	umhos/cm	1366	1383
TEMPERATURE	°C	11.8	10.5
eH	millivts	-5	-12
DISSOLVED OXYGEN	mg/L	0.87	0.8
<u>SUPPLEMENTAL PARAMETERS</u>			
TOTAL DISSOLVED SOLIDS	mg/L	652	673

(-) Not Tested

ALBION-SHERIDAN TOWNSHIP LANDFILL
OPERATION AND MAINTENANCE MONITORING

TABLE 3

MONITOR WELL MW-05SB

PARAMETER	UNITS	10/27/99	01/25/00	01/25/00
QUARTERLY PARAMETERS				
NITROGEN, AMMONIA	mg/L	0.13	<0.05	<0.05
ARSENIC, DISSOLVED	mg/L	<0.005	<0.005	<0.005
ANNUAL PARAMETERS				
ALUMINUM, DISSOLVED	mg/L	-	-	-
ANTIMONY, DISSOLVED	mg/L	-	-	-
COBALT, DISSOLVED	mg/L	-	-	-
MANGANESE, DISSOLVED	mg/L	-	-	-
NICKEL, DISSOLVED	mg/L	-	-	-
BENZENE	ug/L	-	-	-
VINYL CHLORIDE	ug/L	-	-	-
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	-	-	-
FIVE YEAR PARAMETERS				
BNAs	ug/L	-	-	-
PESTICIDES	ug/L	-	-	-
PCBs	ug/L	-	-	-
CYANIDE	mg/L	-	-	-
FIELD PARAMETERS				
pH	S.U.	7.45	7.51	7.51
CONDUCTIVITY	umhos/cm	725	738	738
TEMPERATURE	°C	10.7	9.6	9.6
eH	millivts	-19	-27	-27
DISSOLVED OXYGEN	' mg/L	0.67	0.48	0.48
SUPPLEMENTAL PARAMETERS				
TOTAL DISSOLVED SOLIDS	mg/L	421	449	439

(-) Not Tested

ALBION-SHERIDAN TOWNSHIP LANDFILL
OPERATION AND MAINTENANCE MONITORING

TABLE 4

MONITOR WELL MW-06SB

PARAMETER	UNITS	10/28/99	10/28/99#	01/25/00
<u>QUARTERLY PARAMETERS</u>				
NITROGEN, AMMONIA	mg/L	26	24	19.2
ARSENIC, DISSOLVED	mg/L	0.164	0.164	0.133
<u>ANNUAL PARAMETERS</u>				
ALUMINUM, DISSOLVED	mg/L	-	-	-
ANTIMONY, DISSOLVED	mg/L	-	-	-
COBALT, DISSOLVED	mg/L	-	-	-
MANGANESE, DISSOLVED	mg/L	-	-	-
NICKEL, DISSOLVED	mg/L	-	-	-
BENZENE	ug/L	-	-	-
VINYL CHLORIDE	ug/L	-	-	-
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	-	-	-
<u>FIVE YEAR PARAMETERS</u>				
BNAs	ug/L	-	-	-
PESTICIDES	ug/L	-	-	-
PCBs	ug/L	-	-	-
CYANIDE	mg/L	-	-	-
<u>FIELD PARAMETERS</u>				
pH	S.U.	7.13	7.13	7.44
CONDUCTIVITY	umhos/cm	1258	1258	1146
TEMPERATURE	°C	11.6	11.6	8.5
eH	millivts	-4	-4	-26
DISSOLVED OXYGEN	mg/L	0.95	0.95	0.71
<u>SUPPLEMENTAL PARAMETERS</u>				
TOTAL DISSOLVED SOLIDS	mg/L	605	612	565

(-) Not Tested

ALBION-SHERIDAN TOWNSHIP LANDFILL
OPERATION AND MAINTENANCE MONITORING

TABLE 5

MONITOR WELL MW-08SB

PARAMETER	UNITS	10/28/99	01/25/00
QUARTERLY PARAMETERS			
NITROGEN, AMMONIA	mg/L	0.52	0.9
ARSENIC, DISSOLVED	mg/L	<0.005	<0.005
ANNUAL PARAMETERS			
ALUMINUM, DISSOLVED	mg/L	-	-
ANTIMONY, DISSOLVED	mg/L	-	-
COBALT, DISSOLVED	mg/L	-	-
MANGANESE, DISSOLVED	mg/L	-	-
NICKEL, DISSOLVED	mg/L	-	-
BENZENE	ug/L	-	-
VINYL CHLORIDE	ug/L	-	-
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	-	-
FIVE YEAR PARAMETERS			
BNAs	ug/L	-	-
PESTICIDES	ug/L	-	-
PCBs	ug/L	-	-
CYANIDE	mg/L	-	-
FIELD PARAMETERS			
pH	S.U.	7.25	7.38
CONDUCTIVITY	umhos/cm	928	960
TEMPERATURE	°C	11.4	9.4
eH	millivts	-10	-17
DISSOLVED OXYGEN	mg/L	0.48	0.12
SUPPLEMENTAL PARAMETERS			
TOTAL DISSOLVED SOLIDS	mg/L	558	580

(-) Not Tested

ALBION-SHERIDAN TOWNSHIP LANDFILL
OPERATION AND MAINTENANCE MONITORING

TABLE 6

MONITOR WELL MW-09SB

PARAMETER	UNITS	10/28/99	01/25/00
<u>QUARTERLY PARAMETERS</u>			
NITROGEN, AMMONIA	mg/L	13	12
ARSENIC, DISSOLVED	mg/L	<0.005	<0.005
<u>ANNUAL PARAMETERS</u>			
ALUMINUM, DISSOLVED	mg/L	-	-
ANTIMONY, DISSOLVED	mg/L	-	-
COBALT, DISSOLVED	mg/L	-	-
MANGANESE, DISSOLVED	mg/L	-	-
NICKEL, DISSOLVED	mg/L	-	-
BENZENE	ug/L	-	-
VINYL CHLORIDE	ug/L	-	-
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	-	-
<u>FIVE YEAR PARAMETERS</u>			
BNAs	ug/L	-	-
PESTICIDES	ug/L	-	-
PCBs	ug/L	-	-
CYANIDE	mg/L	-	-
<u>FIELD PARAMETERS</u>			
pH	S.U.	7.17	7.31
CONDUCTIVITY	umhos/cm	1239	1235
TEMPERATURE	°C	11.3	10
eH	millivts	-6	-14
DISSOLVED OXYGEN	mg/L	0.48	0.56
<u>SUPPLEMENTAL PARAMETERS</u>			
TOTAL DISSOLVED SOLIDS	mg/L	656	662

(-) Not Tested

ATTACHMENT B-2

Laboratory Analytical Data Summary Tables for Residential Wells

ALBION-SHERIDAN TOWNSHIP LANDFILL
OPERATION AND MAINTENANCE MONITORING

TABLE 7

RESIDENTIAL WELL RW-04

PARAMETER	UNITS	10/28/99	2/03/00
<u>QUARTERLY/ANNUAL PARAMETERS</u>			
NITROGEN, AMMONIA	mg/L	0.23	0.15
ARSENIC, DISSOLVED	mg/L	<0.005	<0.005
ALUMINUM, DISSOLVED	mg/L	<0.1	<0.1
ANTIMONY, DISSOLVED	mg/L	<0.005	<0.005
COBALT, DISSOLVED	mg/L	<0.01	<0.01
MANGANESE, DISSOLVED	mg/L	0.082	0.052
NICKEL, DISSOLVED	mg/L	<0.05	<0.05
BENZENE	ug/L	<5	<1
VINYL CHLORIDE	ug/L	<1	<1
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	<1	<1
<u>FIVE YEAR PARAMETERS</u>			
BNAs	ug/L	-	-
PESTICIDES	ug/L	-	-
PCBs	ug/L	-	-
CYANIDE	mg/L	-	-
<u>FIELD PARAMETERS</u>			
pH	S.U.	7.44	7.45
CONDUCTIVITY	umhos/cm	709	737
TEMPERATURE	°C	12.8	13.5
eH	millivts	-21	-24
DISSOLVED OXYGEN	mg/L	6.08	1.41
<u>SUPPLEMENTAL PARAMETERS</u>			
TOTAL DISSOLVED SOLIDS	mg/L	-	402

(-) Not Tested

ALBION-SHERIDAN TOWNSHIP LANDFILL
OPERATION AND MAINTENANCE MONITORING

TABLE 8

RESIDENTIAL WELL RW-06

PARAMETER	UNITS	11/2/99	2/03/00
<u>QUARTERLY/ANNUAL PARAMETERS</u>			
NITROGEN, AMMONIA	mg/L	<0.05	<0.05
ARSENIC, DISSOLVED	mg/L	<0.005	<0.005
ALUMINUM, DISSOLVED	mg/L	<0.1	<0.1
ANTIMONY, DISSOLVED	mg/L	<0.005	<0.005
COBALT, DISSOLVED	mg/L	<0.01	<0.01
MANGANESE, DISSOLVED	mg/L	0.036	0.047
NICKEL, DISSOLVED	mg/L	<0.05	<0.05
BENZENE	ug/L	<5	<1
VINYL CHLORIDE	ug/L	<1	<1
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	<1	<1
<u>FIVE YEAR PARAMETERS</u>			
BNAs	ug/L	-	-
PESTICIDES	ug/L	-	-
PCBs	ug/L	-	-
CYANIDE	mg/L	-	-
<u>FIELD PARAMETERS</u>			
pH	S.U.	7.44	7.69
CONDUCTIVITY	umhos/cm	(1)	865
TEMPERATURE	°C	12.7	8.3
eH	millivts	-16	-37
DISSOLVED OXYGEN	mg/L	1.82	3.38
<u>SUPPLEMENTAL PARAMETERS</u>			
TOTAL DISSOLVED SOLIDS	mg/L	-	475

(-) Not Tested

(1) Instrument malfunction, no reading available.

ALBION-SHERIDAN TOWNSHIP LANDFILL
OPERATION AND MAINTENANCE MONITORING

TABLE 9

RESIDENTIAL WELL RW-07

PARAMETER	UNITS	2/03/00	2/03/00#
<u>QUARTERLY/ANNUAL PARAMETERS</u>			
NITROGEN, AMMONIA	mg/L	<0.05	<0.05
ARSENIC, DISSOLVED	mg/L	<0.005	<0.005
ALUMINUM, DISSOLVED	mg/L	<0.1	<0.1
ANTIMONY, DISSOLVED	mg/L	<0.005	<0.005
COBALT, DISSOLVED	mg/L	<0.01	<0.01
MANGANESE, DISSOLVED	mg/L	0.034	0.034
NICKEL, DISSOLVED	mg/L	<0.05	<0.05
BENZENE	ug/L	<1	<1
VINYL CHLORIDE	ug/L	<1	<1
1,2-DIBROMO-3-CHLOROPROPANE	ug/L	<1	<1
<u>FIVE YEAR PARAMETERS</u>			
BNAs	ug/L	-	-
PESTICIDES	ug/L	-	-
PCBs	ug/L	-	-
CYANIDE	mg/L	-	-
<u>FIELD PARAMETERS</u>			
pH	S.U.	7.56	7.56
CONDUCTIVITY	umhos/cm	664	664
TEMPERATURE	°C	10.3	10.3
eH	millivts	-30	-30
DISSOLVED OXYGEN	mg/L	0.53	0.53
<u>SUPPLEMENTAL PARAMETERS</u>			
TOTAL DISSOLVED SOLIDS	mg/L	357	368

(-) Not Tested

(#) Duplicate sample

ATTACHMENT C

Field Data Summary Tables

ATTACHMENT C-1: Ground-water Elevation Summary Table

ATTACHMENT C-2: Gasprobe Monitoring Summary Table

ATTACHMENT C-1

Ground-water Elevation Data Summary Table

ALBION-SHERIDAN TOWNSHIP LANDFILL

OPERATION AND MAINTENANCE MONITORING

TABLE10

SUMMARY OF GROUND-WATER ELEVATIONS¹ IN MONITOR WELLS

MONITOR WELL I.D.	10/27/99	1/25/00	MEAN	MINIMUM	MAXIMUM	MAXIMUM FLUX ²
UNCONSOLIDATED SATURATED UNIT						
MW01SG	982.36	--	--	--	--	--
MW02SG	949.61	949.22	949.42	949.22	949.61	0.39
MW03SG	946.63	946.63	946.63	946.63	946.63	0.00
MW04SG(WB)	946.07	945.93	946.00	945.93	946.07	0.14
MW05SG	948.69	--	--	--	--	--
MW06SG	946.92	--	--	--	--	--
MW07SG	946.49	--	--	--	--	--
MW08SG	955.30	--	--	--	--	--
MW09SG	945.69	945.56	945.63	945.56	945.69	0.13
MW10SG	945.68	--	--	--	--	--
MW11SG	--	--	--	--	--	--
MW12SG	--	--	--	--	--	--
MW13SG	--	--	--	--	--	--
DEEP BEDROCK UNIT						
MW04DB	965.24	945.88	955.56	945.88	965.24	19.36
MW16DB	--	--	--	--	--	--
SHALLOW BEDROCK UNIT						
MW01SB	--	--	--	--	--	--
MW02SB	948.99	948.60	948.80	948.60	948.99	0.39
MW03SBA	946.16	946.00	946.08	946.00	946.16	0.16
MW04SB(SB2)	946.07	945.91	945.99	945.91	946.07	0.16
MW05SB	946.95	--	--	--	--	--
MW06SB	946.08	945.93	946.01	945.93	946.08	0.15
MW07SB	946.02	945.85	945.94	945.85	946.02	0.17
MW08SB	946.10	--	--	--	--	--
MW09SB	946.06	945.90	945.98	945.90	946.06	0.16
MW15SB	--	--	--	--	--	--
MW16SB	--	--	--	--	--	--
WEATHERED BEDROCK UNIT						
MW01WB	--	--	--	--	--	--
MW02WB	949.33	948.95	949.14	948.95	949.33	0.38
MW03WB	946.08	946.08	946.08	946.08	946.08	0.00
MW04WB(SB1)	946.07	945.93	946.00	945.93	946.07	0.14
MW06WB	945.70	--	--	--	--	--
MW07WB	946.01	--	--	--	--	--
MW08WB	946.14	--	--	--	--	--
MW09WB	945.72	945.58	945.65	945.58	945.72	0.14

Notes: 1) All ground-water elevation data are in ft./USGS.
 (-) Not Available

ATTACHMENT C-2

Gasprobe Monitoring Data Summary Table

ALBION-SHERIDAN TOWNSHIP LANDFILL

OPERATION AND MAINTENANCE MONITORING

TABLE 11

SUMMARY OF EXPLOSIVE GAS MONITORING IN GAS PROBES

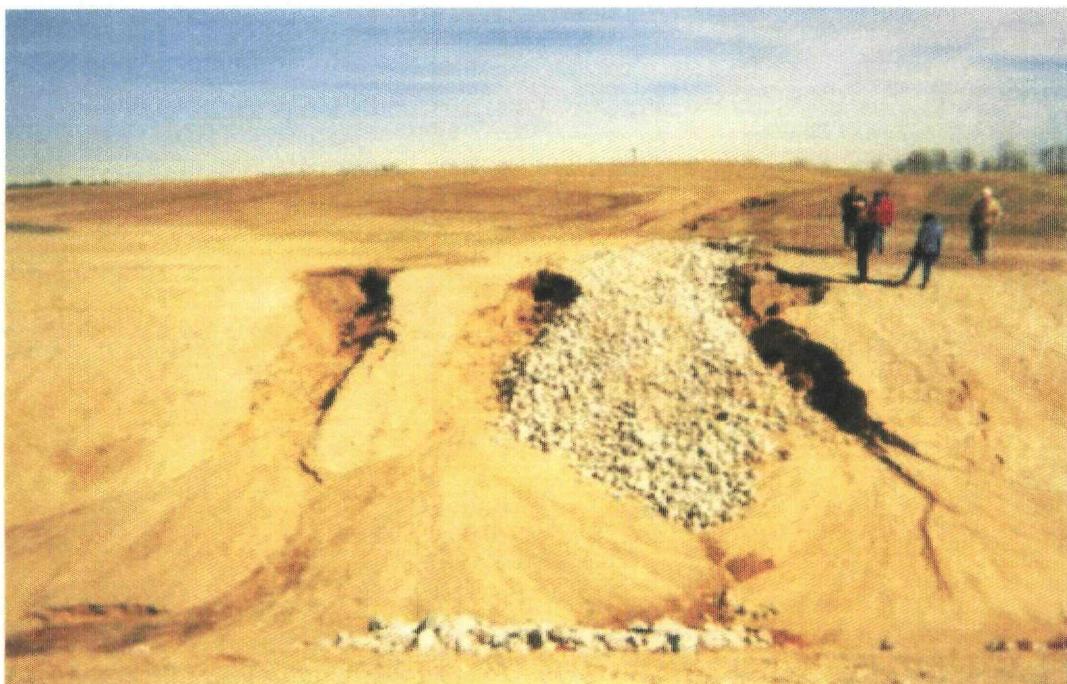
GAS PROBE I.D.	1/25/00				
	% Gas	% Lower Explosive Limit	% H ₂ S	% O ₂	Water Level (ft)
GP-1	0	0	0	20.8	DRY
GP-2	18	100	0	13.8	10.33
GP-3	0.4	8	0	19.8	DRY
GP-4	0	0	0	20.8	DRY
GP-5	0	0	0	20.8	DRY

ATTACHMENT D

Photodocumentation



1: EXPOSED LINER IN SOUTHERN DRAINAGE SWALE.



2: EXTENSIVE EROSIONAL FEATURES
NEAR SOUTHWEST LETDOWN

Hull & Associates, Inc.
TOLEDO, OHIO

ALBION-SHERIDAN TOWNSHIP LANDFILL

PHOTO DOCUMENTATION
SHERIDAN TWP. CALHOUN CO., MICHIGAN

JUNE 2000

ALB025



3: EROSION RILLS ON WEST SLOPE NEAR MONITORING WELL NEST # 4.



4: EROSION ON EAST SLOPE OF WEST DETENTION BASIN.

Hull & Associates, Inc.
TOLEDO, OHIO

ALBION-SHERIDAN TOWNSHIP LANDFILL

PHOTO DOCUMENTATION
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5: EROSION STARTING AT NORTHEAST
LETDOWN.



6: EROSION RILLS AND PONDED WATER
NEAR WELL NEST # 3.

Hull & Associates, Inc.
TOLEDO, OHIO

ALBION-SHERIDAN TOWNSHIP LANDFILL

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7: BARB WIRE IN GAP UNDER EAST PERIMETER FENCE.

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